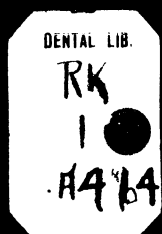
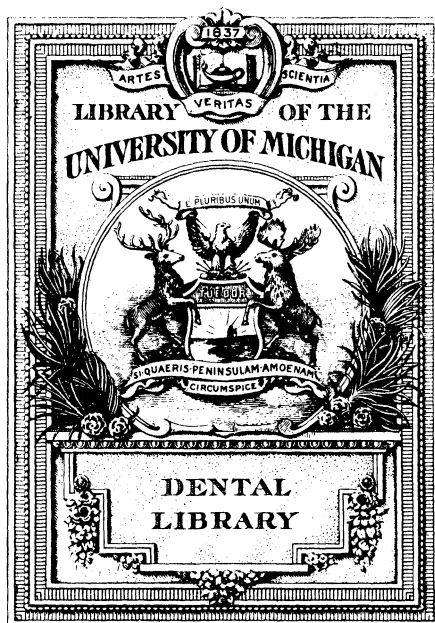


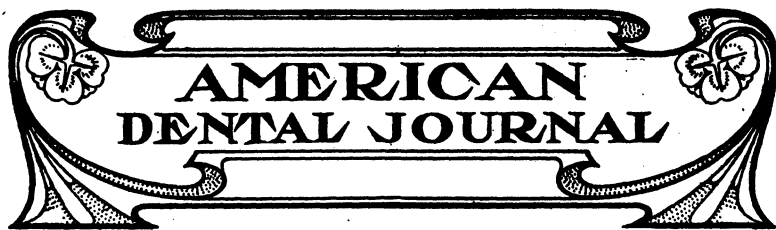
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PROGRESSIVE COURSE OF PRACTICAL INSTRUCTION

ORTHODONTIA.

BY J. N. M'DOWELL, D. D. S.

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ILLINOIS.

CHAPTER XVI.

In the case of Figs. 1, 2, 3, it is usually the result of the extraction of the teeth, either the temporary or the permanent; or it may be the result of the interference with some physiological development of one side of the arch. Figs. 1, 2 and 3 show this condition of malocclusion on one side as the result of extraction in the lower arch. In all the cases the first molar is missing. In the case of Fig. 3 the upper centrals are being squeezed outward by the contraction of the upper arch to accommodate itself to the contracting lower arch. The contracting of the lower due to loss of the first molar. While in Fig. 2 the upper arch contracted so rapidly



Fig. 1.

in following up the contracting lower, the upper bicuspid and molar moving around to one side formed the cuspid into malposition when the proper time came for it to erupt.

Cases coming under this form of malocclusion are complicated, and apparently on first examination are hard to treat; but when we consider the fact that there is malocclusion on one side only, the treatment consists in improving the occlusion on that side. The result of malocclusion on one side leaves its effect upon the anterior teeth, as a rule, and the alignment of these teeth and median line

must be considered. The majority of the cases of malocclusion in this class are due to extracting the temporary teeth early or the extracting of the permanent. This necessitates the extraction of a tooth in the opposite arch to harmonize the two arches, as a rule; but there are some exceptions as in cases where the malocclusion has not existed very long, as in the case of Fig. 3. Here, instead of extracting in the opposite arch, the lower arch was enlarged and restored practically to normal and retained by inserting an artificial tooth. In the case of Fig. 3 the malocclusion of one side is the re-



Fig. 2.

sult of the extraction of the first permanent molar, allowing the lower arch to collapse, the upper contracted, forcing the upper teeth outward in an effort to accommodate itself with the lower. In this case by enlarging the lower and putting in an artificial tooth, the arches were restored to normal occlusion.

Fig. 1 illustrates a case of a class not so very common for the reason that the single extraction of the bicuspid and the moving of the cuspid backward will complete the case. In Fig. 1 there is malocclusion on one side, due to early extraction of the lower first permanent molar. The treatment here is to extract the upper first bicuspid and draw the cuspid backward to alignment. This is a most favorable case for using the traction screw alone at first. Follow later with the use of a reinforcing wire on the inside of the arch to aid in drawing the cuspid inward. It is necessary to have stationary anchorage when using the traction screw. Band the second bicuspid and first molar, soldering the two bands together. Solder the hook on the distal surface of the cuspid,—see figure.

In the case of Fig. 2 some one extracted the first molar about the age of eight years and two of the temporary teeth in the upper arch were removed at the same time. The result is malocclusion of one side of the arch and normal occlusion of the other side to the cuspid.

As the condition is one of long standing, and enlargement of the arches would undoubtedly mar the facial appearance, a tooth in the upper is sacrificed to aid in harmonizing the arches, the occlusion

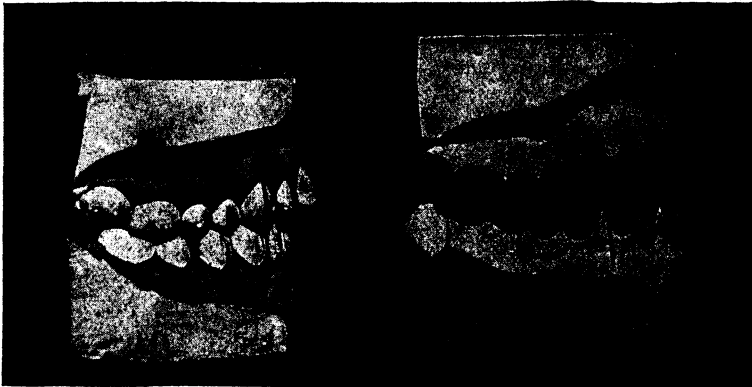


Fig. 3.

and the median line. The author always advises the extraction of the first bicuspid, even if the second is slightly decayed or filled, for the reason that it is not really practical to move the cuspid and first bicuspid backward without moving the anchor teeth forward too much. The root of the cuspid being one of the longest of all the teeth, it is very hard to move.

In case of Fig. 2 the first bicuspid is extracted on the left side to draw the cuspid back to normal occlusion and at the same time restore the upper median line and gain space for the right upper cuspid to come down into normal position. In the treatment of this case it is necessary to use the traction screw on the left side until the cuspid is drawn back. Allow the anchor bands to remain, but remove the traction screw, put on the anchor bands on the opposite side and put on the arch with one of the small traction screws,—see figure. The teeth can be moved slowly around, one at a time, toward the side on which the tooth was extracted, using rubber wedges between the anterior teeth, placing the rubber wedge between the lateral and central. Two days later remove this wedge and place one between the centrals. Two days later remove this and place one between the right central and lateral, then repeat from the first again. You will be surprised to find out how quickly the teeth can be moved around to one side by aiding the small traction screw with the rubber wedges. As soon as the lateral is moved back attach to the central, holding the central steady with a turn around the arch with wire ligature. In case of Fig. 3 the upper teeth were

aligned with the wire arch first and then the lower was expanded. In this case the lower left first molar had been lost early in life, as the result of this the anterior teeth had shifted around to that side until the space had filled up. The upper arch is buckling up in an attempt to accommodate itself to the lower. The treatment here is to restore the upper to a normal condition and then enlarge the lower sufficiently to hold the upper in its proper place. On the right side of the lower arch space was made for an artificial tooth,—

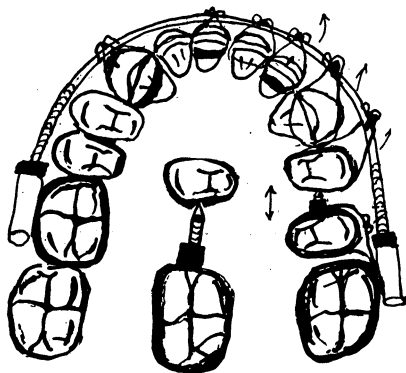


Fig. 4.

a bicuspid. The molar and the cuspid were banded and the bands soldered together. All the other teeth to the left central were banded together. Soft solder spurs were soldered on the wire arch ahead of the teeth to be moved. Wire ligatures were passed around the teeth and over the spurs on the arch, Fig. 4. The nut is used on the mesial end of the tubing on anchor bands and tightened two or three times a week, renewing the wires occasionally. To aid the forward movement a rubber wedge is slipped in between the two bicuspsids. To prevent the rubber wedge from being forced down into the gum tissues by mastication it is best to solder a small spur on one of the bands to hold the wedge in position. When the space is too large for the largest rubber wedge, a soft pine wood wedge may be used, and finally a small jackscrew (Fig. 4), made by soldering a nut to one of the bands, screw a threaded wire into the nut, sharpening the point of the wire, and then drill a small hole near the point of the wire in the other bicuspid and tighten the jack with a small lever wire, slipped into the hole drilled in the point of the wire. The whole appliance is about one-eighth of an inch in length. By turning the wire three or four times a week the space the full length of the nut is gained, then the band and small jack is removed and a longer threaded wire put in.

(To be continued.)

PROSTHETIC DENTISTRY.

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CHAPTER XXXIV.

The fact that the general system is under consideration should not lead to the inference that as practitioners we should forego the privilege or duty of giving the matter thought, nor should it foster the idea that we are usurping beyond dental limitations. As time goes on it becomes more apparent that our professional duties indicate that we concern ourselves more diligently with every phase of human disorder, induced or provoked by any dental disturbance. This may seem a rather broad definition of our calling, yet our service is limited by legal rather than by physiological laws.

Our profession would this day and age receive greater consideration could we impress the public with the fact that our services are truly important and that organic and functional disorders throughout the human system can be directly traced to abnormal or disorganized oral conditions. I know of no method, policy, plan or purpose which would engender greater public respect than the one calculated to educate the masses to a realization of the broad and far-reaching influence our services may have upon the general health of the person.

Possibly the most interesting theme of all life is the subject of cell physiology and the possibilities which this field possesses is far beyond the ability of human mind to describe. If we thoroughly understood the single cell, all living bodies with their wonderful complexities would soon resolve themselves into plain and easily understood objects. The recent experiments of Prof. Robert Hamilton tend to prove the existence in every highly organized development of two lives, the one a life resident in every atom of the structure, the other the unity of all these atomic lives, a life for which we have failed to find an expression. Notwithstanding that the atomic lives are subordinated by the grand or central life, the latter is dependent on the atomic energy and a co-existence is established which science has yet to solve.

Just as each atom contributes to the entirety, so every fibre contributes to the organ, and in turn every organ donates to the

perfected whole. And in the same ratio the entire organism depends on the parts or subordinaries. Every fibre in animal life is subject to development or decadence. The progression or retrogression is dormant or alive according to its size or importance. In animal life activity and development are synonymous terms, while disuse and waste are similar words. In the animal kingdom the forces of destruction are constantly at work, and the forces of renovation and repair are equally active, but they do not remain perfectly matched, for at times the energy of the mind or body may be so great as to overtax the residual forces and the physical being becomes exhausted, and if this same activity is continued the body soon suffers, indicated by loss of weight and lack of mental vigor; and again we may have the forces of repair, the ruling agent and the mind is clear, the body strong and the entire nervous system alert and vitalized. This constant war of forces is largely supplied by the food we eat and the mental energy supplied. A sluggish person, slow of movement and of thought, as well, does not destroy the cellular life as rapidly as one who is active and industrious—but the latter has the advantage of living under the influence of new and quickened vitality, since his energy wastes the elements and eliminates this waste product while the indolent harbors this poisonous matter, because of the lack of molecular and fibrous exercise. Every action, be it mental or physical, necessitates destruction; and the tissue or part which has been affected must of necessity be restored or the waste would be greater than the repair, which would mean early decay and death.

Nature despises disuse. She has a standing resolution which reads: "The idle and unused shall be cast off," and this applies to the teeth, which, allow me to say, are no exception to this edict. If you were to have your right hand bound close to your chest and it were to remain so for a period of one year you would not be able to control it upon emancipation. Use and development have come to mean the same, and nature furnishes an example in the sightless fish at the Mammoth Cave, Kentucky. Nature says, why have these eyes when they are not used? Atrophy in nature, as in political life, means waste and death. As in the whale the teeth are imbedded or encased in the jaw and never erupt. The whale having no use for them, nature does not beget the teeth. All life testifies to the premoidal law that what is not employed shall be gradually destroyed.

The general public in the cities have been inoculated by the virus known as haste, hustle and hurry. Their meals are eaten in five minutes, and only substances requiring little chewing are chosen from the bill of fare, and we have learned long since that the teeth need organic exercise. Hasty eating brings with it deranged alimentary and this always means an acid bath for the teeth, and this means eventual destruction. If the American people are suffering from a general disease it is indigestion superinduced by insufficient mastication of foods. Hasty eating and modern cooking have eliminated more good teeth than accident or old age. While visiting England I was impressed with the good sense of these foreign people in that they observe the rules governing appetite better than we who produce our love for the pleasure of life. It is quite perplexing to the American to be obliged to spend so much time at the prandial board, but the English custom of "Loitering at the meal" is indeed an expression of national wisdom. Washington Irving, in his sketch book, clearly portrays the English love for a "good substantial dinner," and throughout the continent as well the folk seem to take the full hour for dinner. The old saying, "after dinner sleep awhile and after supper walk a mile" has grown obsolete and belongs to the age when people worked to live, while now we live to work.

Again, we overlook the necessity of jaw movement in the process of digestion. Taking of foods which are prepared, so-called, requires little mastication, can not guard against dyspepsia and kindred stomach disorders. The food must be left in the mouth sufficiently long to be saturated with saliva and to assure its liberal flow the jaw must be set in motion. Oatmeal, and the various breakfast foods, do not require this, and the sucking or mere process of deglutition does not bring forth the saliva, and hence the proper action of the saliva is omitted and this will have its ill effects on the effect and force of the food. We should choose such foods as will stimulate the flow of saliva and develop the glands and strengthen the secretions. Select foods which exercise the teeth. This stimulates the circulation in the periodontal membrane and induces a quickened circulation in the tissues of the gingiva and possibly wards against pyorrhea and other forms of diseases of waste.

The mere moving of the jaw as in speaking does not stimulate the glands sufficiently. Experiments which I have made have led me to conclude that the parotid and submaxillary glands are pro-

voked into action by tension of the masseter muscle. That these muscles, during their vigorous activity, stimulate these glands.

The mind exercises a powerful control over all atomic life, and the student of cell physiology, as well as the pupil of nature, need not go beyond their own bodies for a laboratorial or ocular demonstration.

One hears and reads much these times of muscular and athletic development, induced by exercise and mental influence. This cannot be known as a new idea. The basic thought of this system can be found in a sentence by Darwin in his "Descent of Man," page 30, where he speaks of influencing organs or nerve or muscular fibres, as follows:

"I have seen one man who could draw the whole ear forward; other men can draw it upward; another who could draw it backward. It is probable that most of us, by often touching our ears and thus directing our attention toward them, could recover some power of movement by repeated trials."

That the exercise of the jaws and mental direction changes the face I firmly believe. I have observed in patients who had suffered the loss of most of the teeth on one side of the mouth that the cheek was thinner and more flabby. I concluded that this was entirely due to the loss of the teeth, but I have come to believe that since the patient can not masticate where there are no teeth, the entire exercise is conducted on the side containing teeth. The additional work placed upon this side of the mouth develops the salivary glands doubly, while on the opposite side atrophy practically sets in, causing absorption and thinness of cheek.

Again nature has so arranged the salivary system that the glands will only respond on that side of the mouth where actual mastication is in progress, again proving that the glands excrete only under pressure. The sucking or mere swallowing, as is done in eating soup and soft foods, does not beget a free or full flow; movement of the jaw is not sufficient. It requires pressure. The jaws must be forcefully brought into antagonism, and thus produce an effect on these glands. Besides the action of the jaw, the mind should exert its influence upon both jaw and glands. The effect of mind over body is well and most easily demonstrated regarding oral secretions, and flow of buccal mucus. Mental exertions exert a control over its flow, sometimes diminishing it as in moments of great

anxiety. Its flow is often completely stopped by fear, while suggestion increases it and not infrequently induces an abundance of the watery fluid.

The saliva has many functions. It is a necessary intermedium in the sense of taste,—substances to be sapid must be more or less soluble in this juice; if insoluble, they are tasteless. It moistens the interior of the mouth, aiding the art of speech. But chiefly it promotes the process of digestion, and in this latter fact we should be more concerned, since its flow is, I believe, controlled by the activity of the jaw. I do not mean by mere jaw movement, but jaw action. Nature requires that the food shall be crushed and pulverized by the teeth, and softened and chemically changed and prepared by the saliva, and when these two processes are accomplished, the food is ready for the stomach. The present prepared foods do not beget jaw action, hence I contend do not receive the proper amount of parotid saliva and the foods lacking this pre-stomachic treatment must of necessity lack in the blood producing elements. The mischief of this poorly prepared morsel may be one of the prevailing ailments of dyspepsia, and may also be conducive to the ravaging increase of consumption. Tuberculosis makes great headway in any system that is exhausted; in any person whose vitality is low; in any individual whose energy is lessened through impoverishment of blood. The action of the jaw being omitted, the flow of the parotid saliva is scant, the food morsel improperly prepared, digestion disturbed, the blood impoverished, and, hence, with lack of organic and systemic energy, tuberculosis, pyorrhea and all consuming diseases readily progress. All this destruction of human life has been aided, not induced, by disregard of the cardinal principle of digestion. By our present methods of hasty eating, giving neither thought nor time to the process of manducation and mastication, the human or civilized species, disregarding nature's greatest and most divine requirement, histogenetic digestion. A case recently brought to my attention may be of interest in this direction. A young lady patient who sustained an injury to the tempro-mandibular articulation, resulting in positive immobility of the jaw, and being obliged to exist on liquid food, gave evidence of the immediate effect of jaw and dental exercise in that her teeth loosened and the parotid saliva practically ceased flowing, her health soon disappearing.

Men versed in the art and science of stock raising will bear

testimony that the cattle as well as swine, which are denied opportunities of vigorous jaw exercise, soon lose the teeth and become diseased.

Our crowns and bridges would last longer if we instructed patients how to put force upon them. As it now is, practitioners dismiss the patient with the edict: "Do not bite hard on the attachment, as it will not endure under severe stress or strain." The result is, the teeth or roots upon which the case is anchored are jealously guarded, and no force of jaw exerted. The roots soon, from disuse and protection, become loose and the bridge or crown becomes a failure because of professional warning. Better instruct patients to bite naturally, using the normal force, even at the expense of repairing or construction of new appliances. The patient's appearance is secondary to his health. It may be esthesia to place on a short bicuspid a porcelain crown, and it may be acceptable to caution the patient against eating on that crown, but I hold it better dental service to adjust a well contoured and accurately filled gold shell and tell the patron: "Now, use all sides of the mouth, eat naturally and retain your health." Porcelain has its place, porcelain has its mission, but when I find that I can not use bulk and get substantial results, I somehow still hold that the properly formed and carefully adjusted gold crown on molars has merits congenial to the laws of physiology.

The dental profession should not construct appliances which will hinder normal masticatory forces. The action of the jaw, its influence on the osseous and vascular tissues, together with its effect on the six major oral glands, and the innumerable minor ones secluded in the cheek and mouth should not be jeopardized because of frail and pretty prosthetic substitutes.

We will continue the study of porcelain removable facings in next issue.

(To be continued.)

DENTAL THERAPEUTICS.

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CHAPTER XXXVI.

We have previously pointed out that the changes produced by ether and chloroform on the human body are very much like that of the lower animals. We have called attention to the fact that during the anesthetic stage with either one or both of these members of the methane series called chloroform and ether, a lowering of temperature in the body is produced, which is the result of the dilated blood vessels of the surface of the body.

It is important that we should understand that chloroform probably has a more deleterious influence than that of ether. Statistics show that the mortality is at least three times as great with chloroform as that of ether. This accounts for the fact that ether is preferable in most all cases, except in individuals where it is truly contra-indicated.

The principal advantages of chloroform are, the readiness with which individuals go under its influence and because it is considerably less bulky and does not ignite when brought in contact with burning substance. It is also considerably less volatile than ether. Its quick action makes it indispensable where an anesthetic must be used quickly, for instance, on the battlefield. Its use is very desirable where struggling and talking is to be avoided. It is also important to use chloroform instead of ether where atheroma or aneurysm is present. In cases of extreme alcoholism ether is to be preferred, from the fact that in such cases the heart is very liable to cease acting. This is more true specially in persons suffering from acute alcoholism. It should be borne in mind that at all times and circumstances ether is very inflammable.

It has been observed in many instances that it is quite impossible to use these anesthetics singly on certain individuals on account of idiosyncrasy, consequently a combination of the two has been strongly recommended by a great many, and some claim great advantages of the two being used, by first starting the anesthetic with chloroform until

the individual becomes quite anesthetized and then administering ether and continuing until the operation is complete. This combination is said to be especially indicated where there is atheroma combined with heart disease and where prolonged action of the anesthetic is required. It has been shown that the danger of chloroform lies in the very early administration of the drug, while the danger of ether lies in the later stages of the anesthesia.

A combination that is known as the A. C. E. mixture consists of varying proportions, but usually this combination is made by taking alcohol, chloroform and ether, equal parts. This mixture is claimed by some to be by far the safest and the most useful anesthetic in a large majority of cases. But, however, it is well to state that in the hands of those unfamiliar with the use of anesthetic agents, it is probably more contra-indicated than either of the other two agents, namely, chloroform and ether.

Before administering any general anesthetic there are certain rules which should be adhered to very closely. The preparation of the patient should in every instance possible be followed out with the greatest care before the administration of any anesthetic. A cathartic should be administered at least twenty-four hours if conditions will permit, and a very light meal at least two or three hours before the anesthetic is given. Examination of the patient should be made for cardiac, renal and pulmonary diseases. The patient then should be put in a position in which respiratory action should be interfered with just as little as is possible. The clothing should be loosened and all foreign bodies that are movable in the mouth, such as artificial dentures, should be taken out in order that the patient's respiratory tract will not be interfered with. The head should be placed in a position equally as low as the rest of the body. This point is many times of great importance and should be strictly adhered to by those administering any one or all these agents in a dental operating chair, in fact, I question whether ether or chloroform should ever be administered in a dental operating chair, for the reason that it is an extremely awkward place to handle a patient; for the person administering an anesthetic should always be in position to have every advantage to handle the patient in case any emergency should arise. Instruments and appliances should be at hand for the removal of the tongue, should it have a tendency to drop back into the throat of the patient. This not infrequently happens

and should be guarded with the greatest of care, for perhaps there is no condition in which a patient would need as quick and proficient action as in case such a condition might occur.

It must also be remembered that danger usually arises from the concentration of the anesthetic. The actual amount required to keep the patient in the stage of anesthesia should be guarded with the greatest precaution. The quantity of ether should be about three and six-tenths to the volume of air, and chloroform one and five-tenths. These limits are comparatively safe. Many apparatuses have been devised whereby such quantities can be pretty uniformly followed out. But it must be borne in mind that apparatuses of any description can not be used with safety in the absence of judgment and skill. Physical experiments in anesthetization show that all the factors can not always be foreseen and that watchfulness of each individual case must be guarded with the greatest of care, because any experienced anesthetizer knows that the patient's condition under any method or any anesthetic is liable to vary from one moment to another. The state of respiratory action should be constantly watched, and if the patient should hold his breath for a few moments the mask or apparatus should be held farther away, because the next respiration is most always sure to be longer and deeper. When respiration becomes slow and shallow, this is an indication that always signifies that the quantity taken is quite sufficient and the amount should be lessened. The main object that the anesthetizer should have is to just keep the patient well under the influence of the anesthetic. It is also important that the anesthetizer should keep the patient thoroughly anesthetized, because the stage in which a patient is liable to receive a shock is more dangerous than that of keeping them well asleep.

It should be remembered that respiration and circulation react one on the other and any disturbance in one is quickly noticeable in that of the other. However, it has been noted that most of the accidents recorded from anesthetics occurred far more frequently by the stoppage of respiration. Some, however, have advised that respiration is all that one may need to take into consideration in anesthesia. From a point of purely legal interpretation a failure in observation of either of these conditions will beyond a doubt incriminate the anesthetizer. The excuse has frequently been made that watching the circulation distracts from a close observation of the respiration, of which the latter is considered of a far more importance than that of the

former. A practical and proficient anesthetizer, if properly alert, can keep both conditions under observation. It not uncommonly happens that where an anesthetizer is accustomed to the use of both ether and chloroform he is liable to take his mind for a moment from one condition to that of the other. As the concentration of ether is much greater than that of chloroform leads sometimes to the mistake of not admitting sufficient quantity of air, and almost before one is aware of the fact his patient is almost in a state of asphyxiation. In such cases oxygen must at once be admitted.

As a rule chloroform is given on a cloth, which under ordinary circumstances should be held some little distance from the face. This cloth is frequently fastened to a wire frame which can easily be removed and the condition of the patient observed. In giving either one of the above named anesthetic agents it should be applied slowly and cautiously, removing it every once in a while from the face to allow the patient to get a good breath of air.

When ether is administered it is usually well to keep the mask somewhat away from the face at first, until the narcotic effects are observed. This lessens the sensation of choking to the patient. The person taking the anesthetic should be instructed before the anesthetic is started to breathe quietly and deeply. If the mind of the patient can be brought into a passive state before the anesthetic is started and there is no excitement, the patient will go under the anesthetic quietly and without very much manifestation of excitement. A great many anesthetizers instruct their patients to count when the narcotic stage has been reached, this sometimes preventing the patient from getting into a state of excitement when the anesthetic is well on the way.

If chloroform is being administered it should be dropped on the cloth in the regular manner. If the patient is not going under the anesthetic very rapidly the drop should be more frequent. Usually about twelve drops per minute will be sufficiently frequent to keep the patient well under the anesthetic, and after the cloth is well saturated the drops should not exceed more than sixty drops a minute under any circumstances. But usually from six to ten drops per minute will keep the patient in a fairly good condition for operation.

We previously called attention to what was considered the fourth stage in anesthesia. When this stage has been reached and the heart or respiration shows signs of failing it is important that the anesthetic

be withdrawn and restoratives at once begun. These consist of at once lowering the head, which is to be taken advantage of in restoring the circulation in the medullary centers, and it is always important that the hand should be placed on the regions of the epigastrium, compressing two or three times with force. As was just stated, the tongue may drop back and in such a case should be drawn forward. It sometimes happens that mucus may accumulate, and if so a swab can be inserted in the mouth and throat and with two or three rotary motions the mucus can easily be removed. Artificial respiration can be resorted to by drawing the hands back up over the head and then compressing them upon the epigastrium with considerable force. The cardiac region should also be compressed and this can many times be accomplished by drawing the arms up over the head and again compressing them on the sternum. This should be done about seventy times per minute, which is not easy of accomplishing in drawing the hands over the head.

Prof. Neal Stewart, of the physiological department of the University of Chicago, has met with great success in cardiac disturbances in animals asphyxiated under chloroform or ether, by making a mechanical apparatus that will keep up the vibratory motion in the cardiac region. He seems to have accomplished a great deal with this apparatus in the restoration of animals under anesthetic agents.

Faradization of the phrenic nerve of the heart has been highly recommended by some, but its success as a restorative has not been considered of sufficient value as to warrant much reliance in such process. It may be said, however, that it will cause contraction of the diaphragm, thus producing respiration, which, if done intermittently, might be of some value. But this only accomplishes the same thing that is accomplished in artificial respiration, and the adjustment of the apparatus for the stimulation of the phrenic nerve might take considerable valuable time that could be better utilized in artificial respiration, thus accomplishing more than could be accomplished with the electric apparatus.

(To be continued.)

OPERATIVE DENTISTRY.

A Series of Shop Talks.

BY R. B. TULLER, D. D. S.**CLINICAL PROFESSOR OF OPERATIVE DENTISTRY, CHICAGO COLLEGE OF
DENTAL SURGERY.**

No. V.

GOLD INLAYS—MATRICES.

In the estimation of the writer and many others, the day has arrived in dental surgery where no good excuse or reason can be found by any dentist of up-to-date pretensions for first buck-and-gagging a patient and then pounding gold into a tooth by the hour or more, when, if it must be gaudy yellow, a gold inlay may be placed instead.

The day has arrived, too, when our patients, knowing it can in many cases, be done, demand relief from every torture that has any sort of valid remedial solution, and particularly when a better preservative filling may be made by the comparatively newer process of inlay work, in the matter of stopping up cavities of decay.

In the matter of compensation, it would be a decidedly unreasonable person, and peculiarly obstinate, who would not be willing to pay as much, and even more, for an operation that produced better results than the older way, with a large part of discomfort and misery left out, and saving much time if it did, also, afford the dentist some relief from strain and back-breaking effort.

That, anyway, is the light in which it should be presented and maintained on the part of dentist if he has acquired the ability to do inlay work. If an operator makes poor gold fillings (and the average are not good) he may also make poor inlays. A poor inlay, however, is better than a poor gold filling. That is to say, an inlay faulty in several respects, but fitting the cavity to any degree of perfection and cemented properly will stop decay at that point and preserve the tooth. The greatest fault of the large majority of gold fillings malleted in, is that they do not hermetically seal the cavity. Microbes, as the name implies, are microscopic affairs, and

can therefore find ingress through microscopic openings—openings that most careful and painstaking operators may leave and, of course, be totally unconscious of. The inlay with its layer of cement between it and the tooth leaves no openings.

Then comes up the question of durability. A gold filling may stay in place a long time after recurrence of decay is evident around it because it is well anchored; but what good is it as a preserver? An inlay, through the fault of the mix of the cement, or improper handling more than anything else, may come out after a time. While it is in place it preserves; and the facts are that with all their dropping out propensities that we hear of, the average life, so to speak, of inlays, taken all in all, is as great or even greater than the average of average gold fillings.

The writer has had the opportunity to inspect a number of gold inlays of other operators, and notably some put in by Dr. W. V. B. Ames, and set with Ames' cement, that had been in place over fifteen years, and that was several years ago, and it is safe to say that they will last the life of the patient if it should be one hundred years. There is not the slightest evidence of failure. The writer has some of his own work that has been in about as long. There are plenty of gold inlays and some porcelains that have been in for ten, twelve, fifteen, twenty, and are good for more than double the time.

Gold has one advantage or virtue over porcelain, and that is its superior strength. Another is that its margins may be burnished down over the cement, practically sealing the cement in.

The strength of gold permits of making an inlay with what in porcelain would be frail prolongations into fissures and frail margins perhaps, but it is at the same time a favorable conductor of heat and cold. That is a disadvantage.

Of course, an inlay can be set only where its hard, unyielding proportions may be passed in and out of the cavity it is made for. It must have room and cavity so shaped that a wax or cement impression can be drawn from it freely and without in any way being distorted.

If the matrix can be made directly in the cavity, the work of building the inlay may begin at once. If an impression is taken, a clear, sharp model of the cavity must be made. If this model is made of something that takes considerable time to harden, as cement or amalgam, the building of the inlay must be delayed accordingly.

whether of gold or porcelain, as these things take hours to harden. It is in many cases and for some dentists, especially if not familiar with the work, a difficult thing to start a matrix and hold it in place while burnishing to an exact fit. To those who experience such difficulties the following method of procedure may be found very satisfactory.

Take an impression with warmed pink base-plate gutta percha, using only enough to fill the cavity and extend a little ways beyond all margins; especial effort being made, when between teeth, to get a good clean-cut outline of the cervical margin, since the gum tissue will sometimes prevent, if not pushed away with the material used, and by especial attention to get it well carried down (or up) at that point. Take this impression away when cool enough not to change, and, impression side up, sink it down into a little mound of plaster mixed soft enough to require no hard pushing that might distort it, and not thin enough to flow over into the impression. The idea is to make a somewhat deep depression with the gutta percha in the bottom, and into which melted metal can be poured.

Now, a little Melott's metal just brought to the melting point may be poured into this after the plaster is hard enough and has been touched over with a little talcum or soapstone powder, and it will not melt up the gutta percha. It is better to wait, however, until the metal just begins to get a little mushy. It can be removed as soon as cool. The whole operation of taking impression, imbedding it and pouring the metal should consume very little time. The model produced if not always as sharp as desired will, if otherwise good, answer very well, as correction will be made in the cavity later on.

Now, the matrix, platinum or gold, may be made in this model, manipulation being easy compared with work in the mouth. When it is done it may need a little trimming; but, except at the cervical where the gum interferes a fairly wide margin or overlap should be left as it helps to prevent change of shape in the matrix in handling and baking.

Having kept patient in chair, now go to the cavity with trimmed matrix, first melting the cavity depression in it full or nearly of sticky wax or gum camphor. Work it gently into the cavity, without forcing, until it is fully seated. The hard wax may, by softening a little with a warm instrument, *if need be*, be forced into

the cavity carrying the matrix material to all walls. Allow to cool. Pick or scrape away the wax along the inside margins enough to permit of burnishing. Careful burnishing of margins inside and out is all that is necessary; beyond that the hard wax has done the work. It should now be carefully teased out of the cavity, when the hard wax may be burned out and building up of inlay be begun.

Sometimes in deep cavities the matrix may be torn some across the floor. In using porcelain this does little harm, as the material will bridge over the space, but in gold inlays the matrix ought to be without holes, which frequently lets the melted gold or solder run through and cover some portions on the wrong side and thus make a misfit. To avoid this, even when invested, it is well to either press a bit of gold foil or crystal gold to cover the tear.

A sort of box inlay may be made by packing a bit of moldine in the bottom of the matrix, and laying over it a bit of platinum so that it touches all sides, and then the gold is melted in over it. When done the moldine is dug out of the break, when a cavern will be left. In setting, this cavern must be filled with cement as well as covering all the cavity surface.

Now, it is generally desirable to get the correct bite and contact of an inlay and not so easy to do it. When sticky wax is used, the patient may bite in it. Then a thin layer of soft wax or paraffin is flowed over the cavity side so that plaster will not stick to it, when removal is desired, and occluding models in plaster may be run up, as is done with crown fitting.

A good way for approximal cavities is to build up in this hard wax just the shape desired and the contact just as wanted. Remove from mouth and with a warm burnisher (not hot) lay platinum foil over the approximal surface until it touches the matrix buccally and lingually, and trim the occlusal edge to correspond with the indentations of the bite at that point. After investing, the wax is burned out, leaving a cavity with metal all around except occlusally. The general outline of metal will give a close idea of the occlusal shape, and, in fact, the gold or solder used to fill up will take on, pretty closely, the shape that is due, requiring but little grinding to allow of good occlusion. A trial or two in the cavity will enable one to correct all errors. If care is taken in trimming away surplus the margin may all be left in such a way that burnishing it down seals in the cement.

(To be continued.)

ORIGINAL CONTRIBUTIONS

TOOTHsome TOPICS.

BY R. B. TULLER.

Were you ever

Very much puddered?

This may be a puddering question.

Never mind. I *know* you have been puddered—unless you are made of brass and have no conscience.

There are a few that way.

But *you*, you were really puddered. Don't you remember when I asked you, when some of the boys were around, for that two-and-half you had owed me for over a year?

Yes, you said it made you feel like thirty cents. I have felt that way myself. Oh, I didn't say from the same cause. This time I felt just like two and a half dollars, but that's all the good it did me.

There are times when I have felt like a dollar, and immediately dropped seventy points when I tried to borrow it and was turned down. That pudders some.

This puddering sensation isn't what you call real pleasant. It comes on suddenly and without warning, and catches a man unprepared, and brings on a nervous cough and causes one often to stammer. It depends somewhat upon the suddenness and violence of the attack.

I know a dentist who was working for a lady who had her little boy with her. He (the boy) was standing about watching the operation with curious interest. He noticed the dentist had, apparently, some difficulty to see and get at the work, so he piped up, "Say, doctor, why don't you climb right up in my mamma's lap?"

Well, in that case both the lady and dentist were puddered. Of course they laughed, but the dentist felt like taking the boy by the ear and leading him out. All the same I've seen, and so have you, dentists of whom I wanted to ask the same sort of a question.

Let me tell you the one time experience of a country town

dentist. He was a young unmarried man, and finances were at the puddered or puddering ebb that made it quite consistent for him to occupy a room adjoining his office as a sleeping room. The apartment was heated by a wood stove. He got wood of a farmer in exchange for dentistry.

This stove wood was piled at the back end of the hallway that penetrated this office building from a flight of outside stairs. One cold winter night, after burning the midnight oil in search of further knowledge (presuming he had some) he discovered, after getting undressed for bed, that there was not wood enough in to keep the fire until morning.

People in a country town retire early as a rule, and at this hour the stillness of death had settled over the place, except for the occasional snapping and cracking peculiar to Jack Frost at 10 below zero.

— It was in the days before “pajamas,” and a long night dress sweeping the floor would rather encumber than otherwise in making a hasty dash down the hall for an armful of fuel. “Doc” hated to dress again for so short an errand, and particularly as no one was in the building but himself. It was a little cool, but a good warm room awaited the return.

As the wood was secured and the doctor neared the office door a mysterious gust of wind from somewhere caused the door to slam shut. Holy smoke! The lock was a spring catch and the key snug in the doctor’s pants pocket on the other side. Here was a dilemma. Here he stood out in the bitter cold embarrassed—I mean puddered—holding an armful of wood, and no way to get in.

It was up to him to get up against the door hard. He had been up against it before. At the cry of fire, one night, in the summer time, he had donned an old suit in haste and dashed out to join his hook and ladder company. After the fire he dashed against the door, and failing to break in, the hook and ladder company put him up through a window.

One wild thought now flew through his brain to step out on the icy stairs and cry fire, and bring the hook and ladder. That thought flew back when he thought of his attire—or lack—and the frigidity of the atmosphere outside. Beside women turn out to fires plentifully in country towns, and his aspect was not becoming. It was so severely cold inside the hall that something had to be done and done

quick. Perhaps with the added wood to his weight the door might yield. It was the only thing to do—unless the wood was bunched on the floor and set on fire. He felt like it; but where was the match? or the trousers to scratch it on? Oh, yes, it could be scratched on the wall, but where was the lucifer? Echo answered, "Huh?"

Say, it certainly was a very puddering situation. But why linger? On to the attack! and on he went with all the force of a run of ten feet across the hallway, plus twenty-five or thirty pounds of hard wood. Bang!

The exercise in itself was good; but the stopping up was too abrupt and was really offensive to one's feelings and detrimental to one's uncushioned anatomy. The wood punched into the abdomen more than was deemed of any massage value. There is such a thing as overdoing.

But it was no time to be dilatory or lazy. Exercise was absolutely demanded, and of the most vigorous kind. It must be forced! Once more to the breach! (Breach? Would that it were one.) Scanning the course again by the dim hall lamp, he shot out once more like a catapult—and then? Whoopee! Did you ever pound your finger or have a horse step on your toes? Wow! Every big stick of wood fell and each one hit a tootsie-wootsie. Oh!!! Jemima! Baker!

No stopping or crying over spilled milk. Exercise! Exercise or freeze! The doctor thought hopping exercise good about this time, and he hopped and hopped; first on one foot, then on t'other; then on both. Whoop! Whoopee! Whoopity-whoop! Gee! Each toe ached worse than the other.

Well, there's no use repeating it all verbatim; besides, there aren't letters in the alphabet suitable to the spelling. Besides (once more) it was said in such emphatic but rapid enunciation that our reporter couldn't get it all down. Only the cold walls echoed it, and the wynds whistled in a long surprised and shocked sort of whistle.

Though hopping exercise is good when one is inclined to be chilly, there comes an end after a time to hopping. If you ever tried to beat zero hopping, even because you couldn't help it, you know it can't be done with great success, though one is unencumbered by clothes, even.

There was an insurance man's name on the door opposite the doctor's door, but he was wisely married and slept at home where his wife could let him in. He was an aristocrat and burned coal in his office. Hence, a box in the hall. A tight box is warmer (about one-tenth degree) than a freezing hallway. The doctor took a doormat up from the door, put it in on the coal and got in and let the top down. How nice and snug and warm! Huh! Oh, yes! The doctor got out.

He could see under the door of the insurance man the glow of a fine coal fire within. He tried to commit burglary. It had its back sets. The doctor got up and thought, or thought he thought. Aha! handsprings and flip-flops. That's the stuff! The doctor was younger then than now, but he never could turn a flop and land on his feet. Still, there was one spring, one flip, one flop—and the usual way of landing. Feet too sore; he couldn't land on them.

Knock a panel out of the door with a chunk of wood! Good thought, but wouldn't work. The door was an old-fashioned heavy door with panels an inch thick. The situation was getting more and more pudgery, even trying. I guess yes.

Hark! What is that? The creak of a footfall out on the ice-bound street. To the stairway! Hey, you! Come up here! C-c-come up here q-q-q-quick! He came, hesitatingly; but he came. It was the depot agent who was just returning from the service of the 1:30 a. m. train. He was a railroad man. He was the savior of a human being from freezing. They both went up against the door. The agent weighed 200. That, helped some.

The doctor invited him in and was so happy that he danced the highland fling or the hoochee coochee; then tried to hug the stove. Things too hot and too cold are not agreeable. The railroad man was wise and he found a bed cover and wrapped it around the doctor and put on a lot of wood, and opened the draft; and the doctor opened a bottle of CHO₂ that happened to be in the armamentarium. The doctor rubbed some of it on his feet, his legs and his hands. The railroad man rubbed some on his nose. CHO₂ is good for snake bite and frost bite. The agent's nose was a bit frost-bitten, and there was a sympathetic strain between him and the doctor. He'd say, "Let me rub a little more of this on your feet, Doc." And the doctor would say, "No, no, go ahead, you, and rub it on your nose."

Say, I want to tell you that I—that the doctor was chilled to the bone, besides being puddered, and it took a long time to get thawed out and easy in mind. But the railroad man stuck until it was time to go to the 7:30 train. The doctor then put out a card, "Called away on business. Be back tomorrow," and went to bed.

The railroad man got a little CHO2 on his tongue, and no one ever heard him tell what a puddering condition the doctor got himself into out in the cold, cold world. He was a good man.

Moral: Beware of snap locks unless you have two keys, one tied to a string around your neck.

(Toothsome Topics every month.)

PULP DEVITALIZATION.

BY J. C. WIDENHAM, JACKSONVILLE, ILL.

In presenting for your consideration "Pulp Devitalization," I know I am dealing with a very delicate subject, and you will pardon me if my faith in the paste I have been using does not agree with yours, as I have found it after two years' use the best I ever used. I believe in two methods of treatment, "*Pressure Anesthesia*" and "*Nerve Quietus*," pressure anesthesia for cases that require immediate removal of the nerve, and Nerve Quietus for cases that come to us in the ordinary run of practice.

It is of Nerve Quietus that I wish to speak to you about today, because I have tried it for two years and I believe in it. I have had but *three failures* so far as I know. The first was a faulty diagnosis. The second was extracted by me because the patient insisted on removal of tooth, the pain being so intense, caused by too much pressure, and not enough cocaine mixed with the nerve quietus. This, I learned afterward by writing the inventor. The third was extracted by another dentist the same day the application was made.

Nerve quietus kills the nerve and mummifies nerve at same time leaving the root filled with nature's own filler—a *killed but preserved* nerve.

Nerve quietus is put up in tablet form, is black, and takes some little force to crush it. Mixed with clove oil and a little cocaine it is ready for use. Apply it same as you apply arsenic. On or after the fourth day thereafter you can remove all, and with a sharp, round bur of proper size dress out the cavity clear down to the entrance to root canals. Let your bur be sharp, so it will shave off the nerve clean-cut to the bottom of the pulp cavity. Now, wet bottom of cavity with No. 2 and dry out with chip blower. Now you are ready to fill the tooth with gold or amalgam, first lining the cavity with cement. (No. 2 is a white powder, dissolved in water, and is used as a cavity wash.)

A tooth may become tender to the touch within four days. In that case leave in no longer, but remove application and fill.

When it is necessary to obtund sensitive dentine, so as to enable you to excavate without pain, seal the paste in the cavity for a few hours only—not more than five hours. Not so long, if only a thin layer of dentine covers pulp. Follow directions and you will find “Nerve Quietus” an ideal nerve paste. I am assured by the inventor that no arsenic enters into the preparation

SOMNOFORM ANESTHESIA.

BY DR. C. M. PADEN,

Mr. Chairman and Gentlemen:—I deem it a great honor and pleasure to have the privilege of standing before so representative a body of men as is assembled here this evening. My subject is "Anesthesia," a subject in which every physician, a subject in which every surgeon, a subject in which every specialist takes the most profound interest. A few years ago Dr. Rolland, late house surgeon of Paris Hospital, professor of anesthesia, and dean of Dental School and Hospital of Bordeaux, France, realized that new discoveries were being made along the lines of medicine and surgery, but that anesthesia had been left in the background. After several years of hard work, study and experimenting he found that which he so anxiously sought, a new anesthetic, composed of three well known drugs in proportion as follows:

Chlorid of Ethyl, 60 per cent.

Chlorid of Methyl 35 per cent.

Bromid of Ethyl 5 per cent.

This combination he called "Somnoform." It will be seen that the various constituents of somnoform are all well known anesthetic agents. The operator must not on that account be prejudiced against the drug, for it is not possible to predict the results which may follow from a mixture by merely knowing those of its components. It is useless for me to call your attention to the fact, for you all well know that the combination of two or more drugs changes the action of the drug. So by experimenting Dr. Rolland found that the combination of these three anesthetic drugs gave him his ideal anesthetic for all minor operations. The following law must be borne in mind: To blend already well known drugs into one mixture from which the respective advantages of each one could be obtained and corresponding effects produced without having many of the inconveniences and the same degree of danger of the individual drugs was the fascinating problem, which after long and patient researches Dr. Rolland solved so ably.

Read before the Chicago Medical Society April 11, 1906.

A series of 1,500,000 favorable cases confirms without doubt the satisfactory laboratory experiments previously carried out, showing conclusively the advantages of this agent over chloroform, ether and nitrous oxid, from the minimum of danger incurred by its administration when employed for brief anesthesia. For this part of my paper showing the physiological action of somnoform, I am indebted to Dr. Aguilar, of Madrid, Spain, who read a paper on anesthesia at the St. Louis Exposition in 1904. Upon the brilliant studies undertaken by Dr. Rolland, the notes have been prepared which I now have the honor of submitting to your consideration and discussion. In order that an anesthetic should enter the respiratory tract and act on the nerve centers, it must be in a gaseous form; and the rapidity of its absorption is in direct ratio to its degree of diffusibility. This is the force which causes the blood corpuscles to become saturated with the narcotic vapors instead of with oxygen; the action of the gas on the nervous system will be rapid in proportion to the rapidity of absorption. Dr. Rolland presents the problem of anesthesia in the following propositions:

First, to produce anesthesia it is necessary that the tension of the anesthetic gas be superior to that of oxygen, so that it may in a certain proportion take the place of the latter in the pulmonary alveoli. Second, the tension of the gas being proportionate to its volatility, the more volatile the gas is, the easier can it be made to take the place of oxygen. Third, the ideal anesthetic, if such be attainable, would be the one behaving in its conditions of entry, of sojourn, and of exit from the body as does oxygen. If we follow the course of oxygen in the body, we see that the red corpuscles, after becoming charged with oxygen in the lungs during inhalation distribute it to the tissue throughout the body. The blood corpuscles have their period of activity during their course through the arterial system. When the oxygen has been given up the corpuscles return through the venous system to the lungs in an inert and dormant state; and there by contact with the oxygen resume their activity. Now, as about twenty-five or thirty seconds are necessary for a red corpuscle after leaving the heart to return to it, we can say that in this diagrammatic division of the circulation in two parts, the one arterial and the other venous, the action of the oxygen would last from twelve to fifteen seconds; therefore, an anesthetic capable of being absorbed practically in the same manner as oxygen should pro-

duce its effects in about fifteen seconds, and when the administration is discontinued it should be eliminated in proportion as the corpuscles of the blood again come in contact with the oxygen. This, almost to precision, is what takes places with somnoform. In the study of this physiological action we observe that somnoform produces the following phenomena:

ON CIRCULATION.

Somnoform has a powerful effect on the sympathetic system, increasing the arterial tension and the frequency of the cardiac contractions. A series of curves of the blood tension taken with the sphygmograph of Marey and the sphygmomanometer of Potain on the radial artery of Dr. Rolland showed in twenty minutes a variation of from $131\frac{1}{2}$ of normal blood pressure to $141\frac{1}{2}$, 17, 17, 13, 14, 15, 14, 14, $131\frac{1}{2}$, during, through and after the anesthetic. The pulse, which was formerly 76 per minute, presented in the same observation a frequency of 76, 84, 76, 68, 68. Respiration, which when normal was 16 per minute, went up to 28, 20, 19, 20, 20, and a careful microscopic study of the blood of subjects under somnoform showed that the anesthesia of from five to eighteen minutes' duration, produced no important modifications in the blood. The urine of the anesthetized person also remained normal.

THE NERVOUS SYSTEM.

Microscopical studies of the cerebral centers show the modifications produced by somnoform on the neuron. The neuron, as is well known, is the anatomical nerve element, or the nerve cell and its branches, as discovered by Ramon y Cajal, of Madrid, and is composed of three parts: First, a central part, which is the real cell with its protoplasma containing with and without peculiar affinity for coloring matter, and its nucleus. Second, a peripheral part made up of protoplasmic branches and the various ramifications (dendrites) with ends which do not anastomose; and, third, the more peripheral part formed by the axis cylinders, which do anastomose.

THE CEREBRUM AND CEREBELLUM.

The investigations were made on the cerebrum and cerebellum of rabbits and cats; first, on non-anesthetized animals (control subjects); and on the animal at the end of anesthesia varying from five to fifteen or twenty minutes; third, on the animal at the end of prolonged anesthesia (one hour or more); and, fourth, on the animal one

hour after consciousness had returned. The staining of the tissue was made by the rapid method of Ramon y Cajal of Madrid, and by the intra-vascular injection of Gubler's methylene blue. In the right carotid artery of the animal experimented upon, injections were made every five minutes of from two to ten cc. (or according to the size of the animal) of methylene blue. At the end of a half hour the brain-case was opened and the microscopic sections were obtained. The researches were always controlled on non-anesthetized animals. The change brought about in the neuron by somnoform differ in the various regions of the cerebrum and cerebellum; also in accordance with the duration of the anesthesia.

FIRST SERIES: SHORT ANESTHESIA.

Cerebral Covering.—The pyramidal cells with their branches remain normal; they did not change in size. The chromophile granulations of the protoplasma could be clearly seen; the nuclei were normal.

Cerebellar Covering.—The methods of Golgi and Nissl show the sharp modifications undergone by the cells of Purkinje, a slight deformation and irregularity of shape. The protoplasmic prolongations were varicose. It appears that from the beginning of the anesthesia the mixture has a particular action on the nerve elements of the cerebellar covering.

SECOND SERIES: DEEP AND LONG ANESTHESIA.

In this series of experiments the guinea pigs died at the end of a quarter of an hour or after twenty minutes. Cats, as well as rabbits, resist for several hours. Where fragments of the nerve centers have been removed from the living animal, or from an animal which has just died, the results obtained by examination are the same, and the modifications are as clear in the cerebral as in the cerebellar covering. Cerebrum.—The cells diminish in volume. The protoplasm presents excessively clearer zones, and the protoplasmic branches remain intact. Cerebellar Covering.—The modifications of the cell of Purkinje are very marked. The protoplasmic branches are deformed and present varicosities and knots.

THIRD SERIES: ONE HOUR AFTER RECOVERY.

There was a return of all the elements to their normal state excepting the cells of Purkinje, which are slower to regain their normal form. Speaking of these experiments Dr. Rolland concludes

as follows: Somnoform has an elective action on the cells of Purkinje, thus suppressing sensitivity to pain and temperature in its passage through the cerebellum; and when there is saturation of excess of the anesthesia the pyramidal cells are impressed, determining loss of consciousness." It only remains to state that the results of this observation show that the minimum of danger is incurred in the administration of somnoform, which during a short operation causes sleep without in any way acting on the cerebral covering. This selective power on the part of certain substances for a definite portion of the nervous system should not be surprising to us. We know, for instance, that chloroform, ether and alcohol have in their action, a preference for the cerebral covering; that cocain in moderate doses acts on the peripheral endings of sensory nerves; that strychnin shows a preference for the cellular elements of the anterior columns of the spinal cord; that nicotine paralyzes the nerve cells of the sympathetic ganglia; that curare acts on the motor nerve endings. These experiments show conclusively that somnoform acts first on the cerebellum and secondly on the cerebrum.

CLINICAL STUDY.

Somnoform, as is the case with any other anesthetic, determines in the patient three well defined states: First, pre-anesthetic period or that of induction. Second, anesthetic period or that of resolution. Third, post-anesthetic period or that of elimination or return to consciousness. In each of these periods we observe two types of phenomena, subjective and objective. The subjective phenomena in the first period are emotional, a feeling of anxiety, of blurred vision, of suffocation, tinnitus aurium, light tickling in the extremities, and the strange sensation of having a warm compress on the cerebrum from the occipital to the frontal lobes. In the second period, or that of anesthesia, the patient experiences no sensation whatever. The third, or post-anesthetic period commences by a sensation of far-away buzzing, the reappearance of the sense of hearing, dreams of different types, gay, religious, amorous, professional, etc., generally in relation to the subject of which the patient was thinking immediately before the anesthesia. At first he fails to recognize the place and the persons that surround him, this state is followed by return of motion, with a tickling in the extremities.

Clinical Classing of Cases.—Clinically we can group the patients as follows: The first class, embracing 90 per cent of all classes, is

constituted of those patients who are tranquil and unresisting, with a dose of from three to five cc., in from fifteen to twenty seconds they are anesthetized, and they remain so from fifty to seventy seconds, and sometimes for nearly two minutes. When they regain consciousness they are pleased, and express satisfaction and wonder at the slight amount of inconvenience they have experienced. The second class will be more difficult to anesthetize. It comprises the restless class of patients who involuntarily resist anesthesia. When the administration begins they fight to get the mask off the face, they swallow but do not breathe, at first; sometimes they cry out, but finally lapse into unconsciousness. These patients are found in the proportion of 8 or 9 per cent. The third class of patients is constituted of the alcoholics, hysterical, epileptics and tobacco users. They are difficult to anesthetize, and the elimination of the anesthetic takes place slowly; they are irritable and the anesthetic seems to have on them a hysterogenic action provoking a nervous crisis. Fortunately this class of patients will be found only in a proportion of about 1 per cent.

After deciding to make a speciality of administering anesthetics for extracting teeth, and for all minor surgical operations, I purchased a somnoform outfit. After several hundred very successful administrations I feel that I am in a position to verify the statement of one of our most eminent writers, "That somnoform is the greatest clinical discovery of modern times." After first taking the anesthetic myself and finding it so pleasing in its action and so perfectly satisfactory in its results, I felt that I could safely recommend it to my patients as a very pleasant and easy anesthetic. My knowledge of administering the drug was limited to the directions accompanying the outfit. I naturally met with some little trouble with some patients, owing to inexperience, all of which were overcome after careful experiments. I found somnoform, like all other anesthetics, does not work well with alcoholics, epileptics and tobacco users. They are difficult to anesthetize and the elimination of the anesthetic takes place very slowly. My experience has taught me, however, that this class of patients take somnoform better than nitrous oxid, chloroform or ether. I have administered somnoform to all classes of people, old and young (my oldest patient being nearly eighty years of age; my youngest being only two years of age), to anemics, insane, sick or well, with most gratifying results in all of my several hundred administrations.

One experience, which was quite an amusing one, was in the case of an elderly physician who came to my office to have two teeth extracted. He objected to an anesthetic. Said he did not think he could be anesthetized. I finally prevailed upon him to allow me to administer somnoform. Before beginning the operation I laid my forceps on the table in front of him, remarking that I would extract the upper tooth first, then the lower one on the opposite side, but doing exactly the reverse. Upon regaining consciousness, he was thoroughly anesthetized, he declared that he knew everything I had done during the operation. I asked him which tooth I extracted first. He was quite sure that I extracted the upper tooth first as I had told him. When his friends laughed and told him of the joke I played on him he was forced to admit that he knew nothing of the operation. He also said: "Somnoform is all right." In one case when a friend timed the operation, in fifteen seconds I was operating, extracted eleven teeth and in one minute and fifteen seconds the patient was thoroughly awake and knew nothing whatever of what had been done. A physician brought to my office an anemic, who was suffering with an alveolar abscess of two years standing. She had visited other dentists and physicians who all advised her not to take an anesthetic of any kind, on account of her anemic condition, but the woman had become desperate; said she preferred death to continued suffering, and it was through her pleading that I consented to perform the operation. Her anemic condition showed no marked difference during the anesthesia. I removed three roots, the direct cause of the alveolar abscess, and the patient got out of my chair exclaiming that she did not realize she had been under an anesthetic. This patient had been confined to her bed for the greater part of two years, and on the day following the operation she sent me word that she had never felt better in her life. My first experience with a child was the case of a little girl eight years old, who came into my office smiling and said she wanted to take gas and have a tooth extracted. Immediately upon her awaking after the operation I asked her how she felt. She said, "Fine and dandy." Another patient was brought to my surgery by a prominent dentist on the north side. He said he had tried on three different occasions to anesthetize her with nitrous oxid. Said he had given her enough gas to fill a balloon. Each time his efforts were unsuccessful, so he decided to try somnoform and brought her to me. She had several bad roots to be extracted. I anesthetized her four

times during the one sitting, without any trouble to myself or inconvenience to the patient. Another case: The patient had the roots of eighteen teeth to be extracted. They were so tightly imbedded in the process, and the hemorrhage was so great after extracting two or three teeth the mouth would be so filled with blood that I could not see to operate, I allowed the patient to wake up and get rid of the blood. After I had extracted the last tooth I was surprised to find that I had administered the anesthetic eight different times at the one sitting. On another occasion a dentist brought a patient, an extremely nervous and excitable subject. Her physician had tried for over two hours to anesthetize her with chloroform, but had to give it up. She resisted the anesthetic, but after working about twice as long as with an ordinary patient I succeeded in thoroughly anesthetizing her. Both patient and dentist were greatly pleased with the operation. I should like to call your attention to the case of a young man who called on a neighboring dentist to have two teeth extracted. Immediately on getting into the chair he fainted. The dentist called C. G. McCullough, M. D., to assist him. After reviving the patient Dr. McCullough advised the dentist to send him to me and have the operation performed under somnoform. The young man came into my office looking very pale and feeling quite nervous. He took the anesthetic very quietly, however, and after the operation he revived and seemed to be all right, but after a few minutes he complained of feeling faint. I administered a restorative and in a short time he left feeling fine. Later in the day the doctor and dentist both called to learn if there were any unpleasant features of the operation and were quite agreeably surprised to hear there were none worth mentioning. I administered somnoform to an epileptic who frequently had as high as four convulsions a day. I gave her the anesthetic four times and extracted several bad roots. During or after the operation there were no bad symptoms. I gave an anesthetic for Dr. Clark W. Hawley for an operation on the ear and throat, and to remove a tumor from the neck. Dr. R. H. Brown for removal of tonsils and adnoids. Dr. N. La Doit Johnson for internal examination, removal of toe nail and for circumcision. Dr. D. C. Orcutt for operation on the ear and nose. Dr. Casey Wood for operation on the eye. Dr. N. M. Eberhart for hemorrhoids. Dr. Francis Buss for tonsilotomy. F. H. Skinner, D. D. S., for oral surgical operation. As I understand these gentlemen are present and will take part in

the discussion of this paper, I will leave it to them to give you their views on somnoform. I also administer the anesthetic for preparing sensitive cavities in teeth, opening abscessed teeth and for lancing abscesses, with the greatest success. In order to ascertain the induction and available time, observations have been made officially at Bordeaux school, on five hundred patients, unprepared for being anesthetized and chosen at random, the operation being carefully timed with a stop watch. With an average dose of $2\frac{1}{2}$ cc., the average induction is 30 seconds, the average duration 73 seconds. Advantage over nitrous oxid: According to one anesthetist on nitrous oxid the induction is 73 seconds, duration 24 seconds, showing that the induction under somnoform is less than one-half than under nitrous oxid, and the duration is more than twice as long. Some operators using nitrous oxid, use a nose inhaler, keeping the patient asleep until the operation is completed. After I have been operating from a minute to a minute and a half, owing to the excessive hemorrhage, which prevents working with any degree of satisfaction, I prefer to allow the patient to wake up and get rid of the blood. I have no trouble to induce the patient to take the anesthetic twice or three times if necessary. For these reasons, and others, which I will not take time to mention I have discarded my nitrous oxid apparatus entirely. Dr. Rolland found in experimenting on animals when anesthesia had been pushed to its extreme limit, with intent to kill, that respiration ceased before the heart's action. When artificial respiration was resorted to the animal speedily recovered. In some cases the animals had ceased to breathe six minutes before the heart stopped beating, giving ample time for artificial respiration. With the absence of asphyxia goes a total absence of cyanosis, the complexion remaining perfectly normal during the entire length of the anesthesia. There is no oxygen available in somnoform, yet there is a striking absence of cyanosis. I am inclined to attribute this to the very quiet respiration. During my experience with nitrous oxid I had quite a scare with two or three patients. One was an athlete, another was a trained nurse, still another was a professional singer, all of whom were practicing deep breathing daily. In all three cases respiration ceased entirely. I was obliged to resort to artificial respiration and when about ready to give up hope I succeeded in reviving the patient. I believe that with these deep breathers the nitrous oxid completely paralyzes the muscles of respiration. Only a few days ago a young

man called to have a tooth extracted. I administered somnoform. When commencing the operation I noticed that he breathed the same as these other patients had, and I was prepared to meet with the same unpleasant symptoms, but to my surprise they were lacking entirely. After the patient revived I asked him if he were in the habit of practicing deep breathing. He informed me that he was a daily visitor at the gymnasium where he practiced a number of deep breathing exercises. From my observations I find that the safety of somnoform lies in its exceedingly rapid absorption and from its equally rapid elimination from the system. A very important matter in anesthesia is there is no swelling of the tongue to impede the operator, and the relaxation of the muscles enables him to make full use of the time at his disposal.

Indications of Complete Anesthesia.—The ocular movements cease in about 20 seconds, the period of induction averages about 30 seconds, the duration of the anesthesia averages about 76 seconds. *The anesthesia deepens after the removal of the mouthpiece.* Eyelids droop, pupils become dilated, soft snoring often ensues, usually complete muscular relaxation, rigidity being the exception. Conjunctival reflex generally lost. After Effects.—There are scarcely any bad after effects whatever; if any they are due to inexperience on the part of the operators, such as administering an overdose of the drug, allowing patient to swallow too much blood, permitting patient to leave the chair too soon after the operation, or performing operation too soon after patient has eaten a hearty meal. Any of these things will produce nausea. One writer claims that these cases of nausea are on an average of 1 per cent. My experience has been a larger percentage than that. I have also observed that patients will experience a feeling of nausea after abstaining from two or more meals before the operation. Somnoform is put up in two forms: A bottle of 60 grammes, containing enough of the mixture for sixteen or eighteen anesthetics, and in capsules containing from three to five cc. for single administrations. I prefer the bottle, because I administer it so often, but I find that the mixture deteriorates after standing for some time. I would advise using the capsules where one administers it occasionally. Some writers claim that nitrous oxid can not be used under certain climatic conditions. In order to find out the effect of tropical climate on somnoform I took an outfit with me on a trip to Central America in 1905. On landing at Ceiba, a sea port town on the northern coast

of Spanish Honduras, I was notified by the officials that all of the other ports were closed on account of the yellow fever, and their advice to me was to go into quarantine, for the required time, and get out of the country on the first steamer leaving port. Dr. Reynolds, the American surgeon, and some of the native surgeons were very anxious to have me try my new anesthetic, and were quite disappointed as well as I myself was in not being able to do so. I was in Ceiba four days, but feared to experiment, as something might happen which would cause the officials to detain me in that country. I came back to North America a sadder man, but no wiser, in so far as somnoform is concerned.

Somnoform is being rapidly introduced in hospitals throughout the world, and has been used for many years by the following well-known hospitals in England:

The Royal Hospital for Sick Children, Glasgow.

Guy's Hospital, London.

Royal Berkshire Hospital, Reading.

Victoria Hospital for Sick Children, Chelsea.

Central London Throat and Ear Hospital, London.

Bradford Royal Infirmary, Bradford.

St. Bartholomew's Hospital, London.

Victoria Hospital, Folkestone.

Brighton Hove and Preston Hospital, Brighton.

King's College Hospital, London.

Hospital for Sick Children, London.

National Orthopedic Hospital, London.

Middlesex Hospital, London.

Reading Dispensary, Reading.

St. Stephen's Hospital, London.

The London Hospital, London.

Royal Boscome Hospital, Bournemouth.

Victoria Hospital, Barnet.

East London Hospital for Children, London.

Royal Southern Hospital, Liverpool, etc.

I may add, gentlemen, that I have here the inhaler which I employ in my practice, but owing to the lateness of the hour I will not go into details regarding it. In conclusion, I consider somnoform the most valuable anesthetic for all minor operations, from the rapidity of its induction, its length of available anesthesia, and the possi-

bility of administering it to all patients and without special preparation, from its pleasant effects, and from its safety, demonstrated not only by the investigations on its action on the nerve centers but also by a clean record of over 1,500,000 cases. I might state here that I searched the medical and dental journals of this as well as other countries to secure the mortality of somnoform, but was unable to find an account of any. Since completing my paper a journal has come to my notice containing an article by one of our nitrous oxid specialists, entitled "Nitrous Oxid vs. Somnoform." He claims that three "precious lives" have been lost through the use of this "dangerous drug." As he did not give the mortality of nitrous oxid gas, I will finish this article by stating that one authority gives it as 1 to 25,000, while another gives 1 to 50,000. I will close my paper by saying that if these 1,500,000 patients had taken nitrous oxid in the place of somnoform, that instead of three, there would have been thirty or sixty precious lives lost.

By the permission of the president I have brought my assistants with me, who will administer the anesthetic to me to show you the mode of administration and the effect on the general system. The ladies had Dr. Paden thoroughly anesthetized in about twenty seconds and he slept for over two minutes. All present were well pleased with its action. Dr. Clark W. Hawley, who was present, stated that they had tried to anesthize him on two different occasions with nitrous oxide gas and the gas had no effect on him whatever. He requested to try somnoform; after stepping to the platform Dr. Paden had him thoroughly anesthetized in about thirty seconds and he remained so for over one and a half minutes. Two minutes after regaining consciousness he arose from his chair and commenced in the discussion of this paper.

CHICAGO MEDICAL SOCIETY.

DISCUSSION ON DR. PADEN'S PAPER.

Dr. Clark W. Hawley: I suffered for two years with nervous prostration, and the only comfort I could get at times would be through the use of chloroform. There is no difference between the taking of somnoform and chloroform, except that anesthesia results more rapidly from the former. The odor and taste of the two are very much alike. I tried very hard to keep track of the sensations, but it was impossible. The feeling of falling asleep is so sudden that I realized no particular sensation, except the smell and taste. The coming out from under the anesthesia is very sudden and there are apparently no after effects.

Quite recently I had a child, about 8 years of age, whom I hesitated to give a general anesthetic. The anesthesia from bromid of ethyl is so short that I knew it would be insufficient. The child had a large polypus in the middle ear, so situated that it was impossible to remove it under a short anesthesia. The tonsils were enlarged and there also were adenoids. I wanted to remove all these structures under one anesthesia. I had Dr. Paden give somnoform, and I was very much pleased with the result. The operation on the ear took some little time. Then I removed both tonsils and the adenoids. I did not feel that I had to hurry. I went from one operation to the other with perfect comfort.

The peculiarities I noticed in the giving of the anesthetic were that the anesthetizer was very little in my way. He just gave sufficient somnoform to keep the patient anesthetized. That is very desirable, because the patient always gets some oxygen between whiffs. It seems to me that must relieve the dangers of giving an anesthetic. There is no cyanosis.

Another case in which somnoform was used was one of tumor of the neck. About the same thing was gone through with as in the previous case and with the same results. I believe somnoform is the most ideal anesthetic for short operations.

Dr. R. H. Brown: I have had but little experience with somnoform. I was present during the operations Dr. Hawley mentioned. What I like particularly about the anesthetic is that it can be removed and given again repeatedly. I have been using bromid of ethyl con-

siderably, but I consider it a very dangerous anesthetic. I have been afraid of it for a number of years. If, during its administration, the patient is allowed to get a few whiffs of air, serious results are likely to follow. I have given it three or four hundred times, and I have had five or six serious cases where the cyanosis was very marked and where respiration stopped entirely.

I have had one death from bromid of ethyl. The respiration stopped first and the circulation immediately afterward, and although artificial respiration was kept up for a long time, and everything was done to stimulate the heart, there was no effect. I have used somnoform in a few cases of adenoids, and in both cases it was necessary to readjust the gag, but it did not interfere with the anesthesia in any way.

The inhaler Dr. Paden uses is a very complete one, but it has one defect, speaking as a throat operator, and that is that the gag between the teeth must be entirely in the mouth, so that it gives us very little chance to hold it outside; but it is possible that another form of gag will be used.

Dr. N. M. Eberhardt: There are many instances where it is necessary to subject the patient to an operation of more than ten or fifteen minutes' duration, and it is in such cases that somnoform is particularly useful. The patient can leave the office immediately after the operation, which is not the case with other anesthetics.

In a case of hemorrhoids that I operated on some years ago the patient had a heart lesion. I had operated some years previously under chloroform anesthesia, but the heart lesion had progressed considerably, and when I operated again I concluded to try somnoform, having first tried it on myself and being very much pleased with the result. The patient was anesthetized completely after nine inhalations and remained perfectly quiet during the ten minutes I operated. Before I could get my instruments out of the way the patient was ready to leave the office. I think it is an ideal anesthetic for these short operations.

A second case, on which I also operated previously, was a very nervous patient. The patient was under the anesthetic about fifteen minutes and did not complain of any after effects.

Prof. C. S. N. Hallberg: I do not like the name somnoform applied to a mere mixture of ethers. There are a number of proprietaries with names quite similar but entirely different in character.

It would be well to have a more scientific name for this mixture. I would like to ask the doctor if he has tried anesthol, a preparation brought forward by Willy Meyer about two years ago, a mixture of ethyl chlorid, chloroform and ether. These mixtures appear to approximate the so-called A. C. E. mixture, and if we compute the specific gravities of these various others we will find that they all approximate the specific gravity of one. It seems that any mixture which is made up of ether, which is exceedingly light, and an ether like ethyl bromide, which is exceedingly heavy, will have a mean specific gravity of one. I believe that that has something to do with the volatility ratio of these mixtures.

For the same reason it would suggest danger in a substance when employed by its high specific gravity, like ethyl bromid, which is much heavier than chloroform. Here may lie the danger in the use of such substances.

Dr. Bloch: I have had occasion to use somnoform in about twenty-five operations, but I never used a gag, and the patient always went to sleep in half a minute. I have also used somnoform preliminary to ether or chloroform anesthesia and found it considerably more rapid than the nitrous oxid method. The longest period I have given the anesthetic was fifteen minutes, during which time a currettement was done and a few hemorrhoids were removed. I used only about 10 cc. of the mixture.

Dr. Higgins: I have given somnoform for operations on the eye with great success. One operation was an iridectomy, but I would never recommend somnoform for such an operation, because the palpebral reflex is not lost completely and the eye does not remain still.

A decorative horizontal banner featuring the word "EDITORIAL" in a bold, serif font. The banner is flanked by ornate scrollwork and illustrations of dental tools, including a pair of forceps on the left and a dental chair or similar apparatus on the right.

EDITORIAL

Dental college education is a special training given to a class of individuals so that they might be able to treat the diseases of the mouth, and especially the diseases of the teeth. They shall also be able to restore the natural teeth by artificial substitutes. This specialty of the healing art may be said to have had its birth, as a distinctive scientific calling, about fifty years ago. It was then that the organization of a special training in a regular and scientific manner was to be followed out, in order that persons who were to look after the care of the mouth might be properly educated to follow such a calling. It was at once thought that they should have an understanding of the anatomical and physiological functions of the head and neck, as well as that of the mouth; so they were subjected to a training in these branches so that they might understand the better adaptability of artificial substitutes to the natural tissue. In these earlier days men of ability, and especially those who were self-denying enough, laid their shoulders to the wheel, which resulted in at once establishing scientific dentistry, or at least the necessity of it. The momentum that was given to dental education of these distinguished and far-sighted men has brought unparalleled success in many particulars.

After twenty-five years of this success a few men who had obtained their education under these great educators who many times adopted all sorts of methods in order that they might attract patronage, conceived the idea of organizing dental colleges in order that they might become professors, and thereby become more attractive to the public as individuals especially in that branch of the healing art that is now known as dentistry. Consequently dental college education became a business for money instead of a professional educational institution, the object of which should primarily be the training of individuals in the art and science of dentistry. And what is true of dental college education has been practically true in medical education. As a lack of appreciation of the laity to good medical and dental education, it became absolutely necessary that the profession should educate those individuals who were to enter the profession at their own expense, with reference to both time and money. This necessity has brought into the profession of the healing art undesirable

material, and the public has had to suffer a great loss from the incompetency and dishonesty of persons who look after the health and longevity of the community that perhaps can not even be guessed at, and still we are able to see some progress.

But within the last fifteen or twenty years it has become a mania in some communities for medical and dental schools. Individuals constitute themselves as a faculty to teach the profession, irregardless of their competency or even their willingness to devote sufficient time to the subjects they are to teach. This kind of education has constantly been bringing the better class of individuals, who have entered the profession, to realize that stringent laws, rules and regulations should be adopted in order that both the public and the profession would not suffer the great misfortune of material harm, to say nothing of the inconvenience and pain to the laity and the stigma of disrespect upon the profession.

A number of years ago the colleges, or at least the owners of the colleges, banded themselves together into an association that would promote better education in dentistry; and that association lived a useful career until they contracted to a large extent a feeling of disrespect for their actions, many not living up to the standard they established. Then the state and local societies made a tremendous effort to bring about the enactment of laws, whereby such irregularities on the part of the colleges could, to some extent at least, be brought into question. Better state laws have been established and a higher type, in a great many instances, of men have been appointed to execute these laws. And just at this time there can be done the greatest good or the greatest harm to dental education, depending to a great extent upon all parties concerned, both college teachers and dental state boards.

Men have entered the career of dental education whose qualifications and honesty of purpose could easily be called into question, and that may account for the stringent rules and regulations that have been adopted by the National Association of Dental Examiners. The desire and necessity many times have driven college men to resort to means of obtaining students, in their particular institutions, that would truly disgust the thoughtful and well-bred professional man. As an illustration: A college dean of an institution who purports that their institution was started and maintained for educational purposes, writes to a student, who is in regular attendance at another

institution, telling him of the awful condition of the institution of learning that he is at that time attending, and that it would require only a few minutes' conversation with the aforesaid student to convince him that there is no comparison between the two institutions. He says that he can prove every word he has said to this student and goes on farther and says: "This may be giving it a little strong, but I am here to back my talk."

Think of a man who is to teach ethical professional life to young men stooping to write a letter to a student in another institution that has at least a reputation of doing as good work as is possible for it to do under the circumstances, and at least has a standing in the College Faculty's Association and the National Association of Dental Examiners.

If we were permitted to know something of the disposition on the part of the deans of such schools as just mentioned, one could not fail to see the necessity for the State to step in and say that the standing should be thus and so, because it seems quite impossible for dental college education to be regulated by the owners and managers of many schools that are in existence. It only requires a few letters like the one referred to to show conclusively that it is not qualified men that are always at the head of dental colleges. Think of a man stating to a student in a letter, I mean a man at the head of an educational institution, that he can back every word of his talk.

It only requires a glance to see the commercialism in dental college education. Some institutions have been truly commercial colleges and have done excellent work in education, but there is one great fault with them all and that is that they are in some respects false to the trust which is imposed upon them as institutions of learning. We have heard many remarks to the effect that many members of the dental examining board should be examined before they are permitted to become examiners. This is also true of some of the dental college teachers. What can be expected or hoped for of a teacher who is daily at the side of his operating chair from early morn till late at night filling teeth? Can you or could anyone expect that man to become a first-class teacher in any branch of his profession? It might be possible that if he could devote every evening to the study of principles of his subject and the allied subjects to the one he is teaching, he might after several years become an excellent teacher, as well as a thoughtful and conscientious ethical practitioner.

The subjects that are taught in dental colleges are no easier to be mastered by dental teachers than by any other men teaching the same subjects. A man to be an anatomy teacher must be in close contact with his books and dissecting table, otherwise he is not an anatomy teacher. And what is true of this subject is true of all the subjects pertaining to dentistry. Therefore in order that a teacher may take charge of a chair in a dental college he should have sufficient evidence that he is competent and will be faithful to his duty.

While it is true that members of the dental examining board should have to show their qualification before they become examiners, it should also be required that only those be permitted to teach who are qualified and are willing to bend their energies and make great personal sacrifices in dental college education. Until the time has come when the profession has shown itself worthy and the laity finds them a necessity, then institutions will be established where at least a small compensation can be given to those who teach, provided they qualify for the profession of teaching, as well as the practice of treating and restoring lost parts to the oral cavity.

While we find it impossible to agree with all the actions and discussions of the National Association of Dental Examiners, still we must agree that they are probably just as honest in their actions as many of those who are college men and who have only a personal and selfish motive.

G. W. C.

CHICAGO-CALIFORNIA RELIEF FUND.

Pursuant to call from Drs. S. F. Duncan, G. V. Black, Truman W. Brophy, W. H. Taggart, C. R. E. Koch, B. J. Cigrand, F. H. Zinn, Elgin Mawhinney, C. N. Johnson, J. H. Prothero and T. L. Gilmer, a meeting of dentists, dental salesmen and dental supply men met at the Northwestern University building, Chicago, April 20, 1906, and appointed a Dental Relief Committee to solicit contributions for the relief of the dentists and dental salesmen of San Francisco and vicinity. The following were made members of the committee: Drs. W. H. Taggart, A. C. Clark, C. R. E. Koch, Truman W. Brophy and Joy L. Frink.

The committee was instructed to solicit funds to be used for the relief of the dentists and dental salesmen in San Francisco, and with characteristic Chicago hustle had printed and mailed during the afternoon and evening 7,500 letters to dentists and dealers in Chicago

and vicinity, and early the next morning placed a check for \$1,000 with the First National Bank of Chicago to be wired to the Oakland committee. Monday morning another thousand was sent by telegram and as we go to press a third thousand in gold is being made ready to send by express. The committee is still in a receptive mood and will be pleased to receive contributions. Send check to Treasurer A. C. Clark, 104 Michigan ave., and thus aid a brother dentist in distress.

Obituary.

DR. THOMAS BENTON ATKINSON.

Dr. Thomas Benton Atkinson was born in Brooks county, West Virginia, April 2, 1838; died in St. Joseph's Hospital, in Keokuk, Iowa, April 16, 1906, of uremia.

He journeyed West in 1862 and settled in Rushville, Ill., where he commenced the practice of dentistry with his father, Dr. Jos. Atkinson, formerly of Pittsburg, Pa.

In 1868 he moved to Astoria, Ill., where he has since resided, and there continued the practice of dentistry.

For the past five years he had been a great sufferer from gravel, and finally was operated on for same, but in his enfeebled condition could not overcome the poisons which finally took his life.

Dr. T. B. Atkinson was married to Eliza J. Gamble, of Jamestown, Pa., in 1861, and to whom six children were born, three of whom, with the wife, survive—Charles M., dentist, of Havana, Ill., Jno. D., banker, of Astoria, and Miss Mabel, who resides with her mother.

Dr. Atkinson was one of the oldest practitioners in the State of Illinois, and continued some of his practice until the day before he was taken to the hospital.



NOTES OF MEETINGS.

NATIONAL SOCIETY MEETINGS.

American Society of Orthodontists, New York, December, 1906.

Institute of Dental Pedagogics, Chicago, December 27, 28, 29.

National Association of Dental Examiners, Atlanta, Ga., September 14, 15, 17.

National Dental Association, Atlanta, Ga., September 18.

STATE SOCIETY MEETINGS.

Alabama Dental Association, Mobile, May 8-11.

California State Dental Association, San Francisco, May 14-18.

Florida State Dental Society, Atlantic Beach, June 13, 14, 15.

Illinois State Dental Society, Springfield, May 8-11.

Iowa State Dental Society, May 1, 2, 3.

Indiana State Dental Association, West Baden and French Lick Springs, June 26-28.

Kentucky State Dental Association, Louisville, June 12, 13, 14.

Minnesota State Dental Association, Minneapolis, June 11, 12, 13.

Mississippi Dental Association, June 6, 7, 8.

New Hampshire Dental Society, Plymouth, May 8-9.

New York State Dental Society, Albany, May 11-12.

Oklahoma Dental Society, Oklahoma City, May 14, 15, 16.

Tennessee State Dental Association, Nashville, May 15-17.

Texas State Dental Association, Galveston, June 14, 15, 16.

Vermont State Dental Society, Brattleboro, May 16, 17, 18.

THE MINNESOTA STATE BOARD OF DENTAL EXAMINERS.

The Minnesota State Board of Dental Examiners will hold a special meeting on June 14, 15 and 16 at the Dental Department of the State University, in Minneapolis, Minn., for the purpose of examining those who desire a license in Minnesota. All applications must be in by noon of June 14. For further information address,

DR. GEO. S. TODD, Secretary,
Lake City, Minn.

SOUTH DAKOTA STATE SOCIETY.

The South Dakota State Dental Society will hold its next regular meeting June 12, 13 and 14, 1906, in Vermilion, S. D.

W. F. PRICE, Sec'y,
Vermilion, S. D.

ARKANSAS ASSOCIATION AND DENTAL BOARD.

The Arkansas State Dental Association meets May 9-10 at Fort Smith, Ark. The State Board of Dental Examiners meets May 7-8.

HENRY P. HOPKINS, Sec'y.

WASHINGTON STATE DENTAL SOCIETY.

The annual meeting of the Washington State Dental Society will be held at Bellingham, Wash., May 24, 25, 26, 1906, and we are assured of a large attendance from Washington and the surrounding States.

NOTICE!

Time and place of annual meeting of Kentucky State Dental Association has been changed. To be in Louisville during Home Coming Week, June 12, 13 and 14. Special railroad rates from all points, beginning Saturday, June 9. A big meeting expected.

W. M. RANDALL, Sec'y, Louisville.

THE CLINICAL CONFERENCE OF THE NEW JERSEY STATE DENTAL SOCIETY.

An opportunity is afforded anyone having a difficult case in surgery, orthodontia, operative or prosthetic dentistry to present the case for consultation at the coming meeting in July at Asbury Park, N. J. It is hoped that advantage will be taken of this chance to get the opinion and advice of men of exceptional ability in their special lines. Correspondence is solicited.

The committee desires a concise history of the cases on or before May 30th if possible.

J. G. HALSEY, Chairman,
Swedesboro, N. J.
W. W. CRATE, Camden.
SARAH G. JACKSON, Vineland.
W. H. GELSTON, Camden.
A. PERCY ROBERT, Elizabeth.
J. A. WAAS, Hammonton.
F. K. HEAZELTON, Trenton.

INDIANA STATE DENTAL EXAMINERS.

The Indiana State Board of Dental Examiners will hold its next meeting in the Capitol building, Indianapolis, beginning at 9 o'clock, Tuesday, June 12th. All applicants for registration in the State will be examined at this time. Applications must be filed with the secretary not less than five days prior to above date. For further information apply to

F. R. HENSHAW, Sec'y.
Middletown, Ind.

MISSISSIPPI DENTAL ASSOCIATION.

The thirteenth annual meeting of the Mississippi Dental Association will meet in Gulfport, June 6th, 7th and 8th.

All ethical practitioners of this and other States are cordially invited to attend. Every effort is being made to have this the largest and most profitable meeting ever held and the pleasures of Gulfport, on the coast at this time of year, is a feature in itself.

Reduced hotel accommodations and the usual reduced rates on all railroads will be obtained.

For complete details address the secretary. Yours truly,
E. DOUGLAS HOOD, Sec'y.

CONNECTICUT STATE DENTAL ASSOCIATION.

The annual meeting of the Connecticut State Dental Association was held at Bridgeport, April 17-18. It was the most successful meeting ever held by that body. The following officers were elected for the ensuing year:

President—Dr. A. W. Crosby, New London.

Vice-President—Dr. Frederick Hindsley, Bridgeport.

Secretary—Dr. Edward S. Rosenblath, Bridgeport.

Treasurer—Dr. W. O. Beecher, Waterbury.

Assistant Secretary—Dr. A. V. Prentiss, New London.

Executive Committee—Dr. F. T. Muerless Jr., of Windsor Locks; Dr. F. W. Brown, New Haven; Dr. Frank J. Erbe, Waterbury.

IOWA STATE BOARD.

The Iowa State Board of Dental Examiners will hold its next meeting at Iowa City beginning at 9 a. m. Thursday, June 14th. Practical examination will be held in operative dentistry and writ-

ten examination in the following branches: Anatomy, physiology, chemistry, metallurgy, oral surgery, materia medica, pathology and therapeutics, histology, hygiene, orthodontia, dental jurisprudence, bacteriology, operative and prosthetic dentistry.

All applications for examination must be filed with the secretary by June 5th.

For application blanks and further information apply to

E. D. BROWER, Sec'y,
Le Mars, Iowa.

FIRST ANNUAL MEETING NATIONAL ASSOCIATION OF DENTAL SALESMEN.

The first annual meeting of the National Association of Dental Salesmen was held co-incidental with the big manufacturers' and dealers' meeting at the Auditorium, March 26 to 30, 1906. The object of the association is co-operation and exchange of ideas among the salesmen for the good of all concerned; making the competition by fraternalism among the members friendly, even if keen; and ever holding to the eyes of all the ideal of doing business as a clever man of sense, character and honesty would do it, always giving and always expecting a square deal from his competitor.

Paper by Mr. C. A. Sykes, president American Dental Trade Association, on "The Dental Trade—Manufacturer—Salesman—Dentist," was read, and addresses by Mr. Frank Marimon on "Commercial Ambassadors" and Mr. W. C. Holman on "Salesmanship" were heard and discussed.

The following officers were elected for the ensuing year:

President—C. A. C. Kelley, Buffalo, N. Y.

Vice-President—Oscar Beig, Philadelphia, Pa.

Treasurer—H. J. Bosworth, Chicago, Ill.

Secretary—Judson Stackhouse, Buffalo, N. Y.

The following were elected as vice-presidents to represent the association in their different sections:

C. N. Bowe—Chicago, Ill.

Wm. Doeloff—Boston, Mass.

H. Q. Altenberg—Des Moines, Iowa.

H. A. Callis—Norfolk, Va.

L. H. Herman—Brooklyn, N. Y.

Dr. O. B. Price—Moncton, N. B., Canada.

MISCELLANEOUS

NEURALGIA.

A hot water bottle covers a multitude of indications; a hot mustard footbath is singularly effective.—*Alk. Clinic.*

MOSQUITO PROPHYLAXIS.

One part kerosene, one soft soap with six of water forms an effective preventive of mosquito and gnat attacks.—*Hammond, Alk. Clinic.*

HEART STIMULANTS.

Strychnine, camphor and caffeine are the most valuable cardiac stimulants that we have; latter aids tissue formation.—*W. H. Porter, Alk. Clinic.*

PREVENTS BLACK MARKS.

Before filling with gold thoroughly cleanse tooth and adjacent tooth with alcohol. It may save you some black marks in the good book.—*Dr. L. A. Badger, Titusville, Pa.*

SENSITIVE DENTIN.

Jarring the tooth with an automatic mallet, having a blunt-point planer in the cavity aids materially in inducing the penetration of fluids into the dentin.—*N. C. Leonard, Dental Headlight.*

FOR ROUGH HANDS.

Take a four-ounce bottle and put in same three ounces of glycerine, one ounce alcohol, and from twenty to thirty drops of carbolic acid. After washing the hands and while they are a little damp apply a few drops and thoroughly rub it in. A good time to use it is at night.—*Pop' Mech's.*

TOOTH MASSAGE.

It is to my mind a question whether it is advisable by excessive use of pumice to rub away the enamel cuticle at points of the tooth which are susceptible to decay as I have found that the destruction of this membrane involves an increase of susceptibility of the tooth to decay.—*W. D. Miller, British Dental Journal.*

WORN MANDRELS.

If a mandrel becomes so rusted or worn that the screw no longer holds, a light blow with a hammer will flatten the hole slightly and cause the threads to hold as good as ever.—*A. C. Willman, Kankakee, Ill., Review.*

PULP EXTIRPATION.

Where immediate extirpation is intended, if a pellet of cotton is placed over the rubber in the cavity a much better pressure can be obtained, as the cotton prevents the rubber from spreading so much under the instrument.—*W. A. Brownlee, Dental Brief.*

PAIN AFTER TOOTH EXTRACTION.

The extraction of an abscessed tooth is generally followed by great pain. I have found lysol to be the ideal remedy in such conditions, placing it undiluted in the socket. It will relieve the pain immediately, help to check the hemorrhage and establish antiseptic conditions in the socket.—*G. B. Winter, Dental Era.*

GOLD FILLING IN THE APPENDIX.

A patient of mine, Mr. J. A. Halfast, reported to me that an operation for appendicitis on his brother last summer disclosed the fact that the etiology lay in a large gold filling which had lodged in the appendix and a sharp edge had perforated the appendix wall. The patient did not recover.—*Dr. L. A. Badger, Titusville, Pa.*

DYSPEPSIA.

Fermentative dyspepsia with acidity of the stomach and heartburn is a pathological condition most readily relieved by the administration of twenty or thirty grains of pancreobismuth with pepsin. This, mixed with one-third of a glass of water after meals will seldom fail in giving temporary relief, and if continued for some time, permanent relief will be had.—*F. H. Benedict, M. D., Med. Brief.*

PREVENTIVE TREATMENT—NITRATE OF SILVER.

It is safe to say that the nitrate of silver leads to the formation of secondary dentin in so far as it converts the acute with the chronic form of decay. The medicament consequently has a double action, in that it renders the decalcified dentin more or less impenetrable to acids, and also facilitates the interposition of a layer of secondary dentin as the part of the living pulp.—*W. D. Müller, British Dental Journal.*

IOWA'S NEW DENTAL LAW.*

SUBSTITUTE FOR HOUSE FILE NO. 16.

A bill for an act amendatory to and additional to the law as it appears in Chapter Nineteen-a (19-a), repealing Twenty-six Hundred-i (2600-i), and enacting a substitute therefor and amending Twenty-six Hundred-h (2600-h) of the supplement to the Code, relative to the practice of dentistry, recognizing certificates of dental examiners of other states and territories, and providing for certificates of removal of dentists from the state.

Be it Enacted by the General Assembly of the State of Iowa:

SECTION 1. The Board of Dental Examiners may, without examination, issue license to practice to any dentist who shall have been in legal practice in some other state or territory for a period of at least five years, upon the certificate of the Board of Dental Examiners or a like board of the state or territory in which such dentist was a practitioner; certifying his competency and that he is of good moral character and upon payment of Twenty-five Dollars (\$25.00). Provided, however, that the state from which any practitioner may come shall have, and maintain equal standards of laws regulating the practice of dentistry and recognize exchange certificates issued by the Board of Dental Examiners of the State of Iowa.

SECTION 2. Any duly licensed dentist of the State of Iowa who is desirous of changing his residence to that of another state or territory shall, upon application to the Board of Dental Examiners and the payment of a fee of Five Dollars (\$5.00), receive a certificate which shall attest that he is a duly licensed dentist of the State of Iowa.

SECTION 3. Amend Section Twenty-six Hundred-i (2600-i) of the supplement to the Code by striking out all of said section and inserting the following in lieu thereof: SECTION 2600-i. Every person to whom a license is issued shall file the same for record with the clerk of the district court in the county in which he desires to practice dentistry and the clerk of the court shall be entitled to a fee of fifty cents for recording such license; and failure to file such license for record within one year after it is issued by the Board

* We are indebted to Dr. W. H. De Ford for copy.

shall work a forfeiture thereof and said license shall not be restored by the Board except upon the payment to it of the sum of Twenty-five Dollars, (\$25.00) as penalty therefor.

SECTION 4. Amend Section Twenty-six Hundred-h (2600-h) of the supplement to the Code by inserting after the word "disbursed" in the third line thereof the following, "and shall publish said report with a list of dentists licensed to practice in the state."

"OUT OF THE MOUTHS OF BABES."

Where does it hurt you, my little maid?
As the young miss of six took the chair.
"Right here, Doctor," she quickly said,
And leaned back with face full of care.

But where does "right here" mean, my dear,
As she sat with her finger in air.
"In my *mouf*, of course, don't you hear?
It jumps every minute—right *nare*."

Poor little maid, poor little tooth;
Just one of those baby ones you know,
That bother patient and doctor both,
Because it hurts the feelings so.

Of course it was just a moment
Before the little tooth was out,
Just a dreadful moment spent,
Thought the little patient, no doubt.

But pretty soon she smiled real sweet
And said, "You're the nicest doctor ever was."
But—with a shake of her small self petite—
"Next time I'll send 'em like Grandma does."

A. Y.

PERSONAL AND GENERAL

Dr. W. E. Mabee, wife and child, of Galesburg, Ill., have just returned from a six months' tour of Europe.

Van Sickle-Lyon.—Dr. A. B. Van Sickle, a dentist at Marshalltown, and Miss Amy Lyon were married April 4.

Dr. Samuel Robert Snodgrass, a dentist at Steubenville, Ohio, died March 27. He was a graduate of Cincinnati Dental College.

Southwestern Texas Dental Society met at New Braunfels March 16 with dentists from San Antonio, Austin, Lockhart and San Marcos.

Dr. J. D. Purcell, a dentist at Madison, Wis., died suddenly of pneumonia. He was thirty-five years old.

Dr. Spencer F. Nash, of New York City, a dentist 61 years old, died April 18th from heart disease.

Dr. George Barnum Scott, a dentist at Buffalo, N. Y., died March 7th of heart disease. His age was fifty-six.

Dr. Horace French Bryant, a dentist at Boone, Iowa, died March 7th of typho-malarial fever. He was sixty-seven years of age.

Fire.—The office of Dr. S. C. Durham, at Reed City, Mich., was totally destroyed by fire; loss, \$975, with insurance at \$500.

Dr. W. W. Dugan, a dentist at Clyde, Ohio, died at his home in Kenton, March 13th.

Fox River Valley Dental Society.—A most successful meeting was held at Neenah, March 13th. A banquet was given in the evening.

Bleiler-Schaffer.—Dr. George B. Bleiler, a dentist at Allentown, Pa., was married April 14th to Miss Rose Schaffer, of Reading.

Dr. L. P. Haskell, of Chicago, conducted the State Dental College clinic held at Dallas, Texas, March 23-24.

Dr. L. A. Gamble, an old-time dentist at McLeansboro, Ill., died recently at Enfield. He was seventy-six years old and had been blind for fourteen years.

Dr. E. W. Dodez of 23 Oxpara avenue, Fort Wayne, Ind., wishes the AMERICAN to announce that he is not dead, as reported. We wish to add, also, that neither is he a "dead one." He has been restored to his usual robust health and is himself again.

Motis-Bernasek.—Dr. Frank A. Motis, a dentist at Lincoln, Neb., and Miss Josephine Bernasek, of Milligan, were married March 24. They will reside in Lincoln.

Dr. Warren Henry Tillinghast, a prominent dentist at Providence, R. I., died April 10th from an illness caused by a fall in the early part of the year. He was in his sixty-fourth year.

Dr. G. Carrow Chame, a dentist at Lansdowne, Pa., died March 24th. He was forty years of age.

Kensuke Ohtsubu, a Japanese dentist, has been arrested on complaint of practicing at Oakland, Cal., without a license.

Dr. Joseph N. Davenport, a dentist at Northampton, Mass., and who had practiced for forty-four years in one office, died April 13th of heart disease. He was seventy-six years old.

Murder and Suicide.—Henry L. Whitbeck, a dentist at Buffalo, killed his wife with a hammer and then shot himself with a rifle. He became insane from drink.

The Whiteside-Lee Dental Society met at Sterling, Ill., March 6th. Papers were read by I. B. Carolis, of Sterling, and Dr. George Cress, of Rock Falls. Next meeting at Morrison.

The Physicians and Dentists of Waukegan, Ill., have formed a society. The society is composed of all the members of the two professions in Waukegan and North Chicago. This idea should spread.

Presented with Gold Cane.—Dr. C. R. Taylor, of Streator, read a paper before the Tazewell County Society at Peoria and was presented with a beautiful gold-headed cane.

Head of the Lakes Dental Club gave a banquet at Superior, Wis., March 17th, in honor of Dr. W. N. Murray, of Minneapolis, who read a paper on "The Future in the Practice of Dentistry."

Dentist's Assistant Injured.—Miss Carrie Chapman, an assistant in the office of Dr. T. T. Smith, at Peoria, was badly scalded by steam from vulcanizer.

New Member of Dental Board.—Governor Frantz, of Oklahoma, has appointed Dr. Fred C. Seids, of Perry, a member of the Dental Board, vice Dr. F. D. Sparks. The latter drafted the bill which created the board.

Dentist Accidentally Killed.—Dr. E. L. Kiser, a dentist at Quasqueton, Iowa, was shot and instantly killed by accidental discharge of a gun in his own hands. He was hunting and was lifting gun from boat.

Dr. Michael H. Healy, a dentist at Westerly, R. I., died at that place March 30, age 29 years. He was a graduate of Philadelphia Dental College, '04.

To Establish Dental Infirmary.—The Dental Society of New London County, Conn., at their last meeting, decided to establish a dental infirmary for the poor of that city.

Dentist a Suicide.—Dr. Ellison Dixon, a prominent dentist at Frankfort, Ind., thirty-two years old, called up his fiancée, Miss Bessie Buchanan, at Indianapolis, March 14, and while talking with the young woman over the long-distance telephone, dropped the receiver and committed suicide by firing a bullet into his head. Dr. Dixon had been ill and insomnia is supposed to have unsettled his mind.

Back from India.—Dr. Davidson, formerly of Streator, Ill., who, with his wife, has been living in Bombay, India, have decided to return to the United States. Dr. Davidson has been practicing dentistry in Bombay.

Connecticut Valley District Society.—A banquet was given by the above named society at Northampton, Mass., March 19th. Dr. C. F. Stockwell acted as toastmaster. A handsome easy chair was presented to Dr. W. H. Jones, of Northampton, who has practiced at that place since 1852.

The Central Nebraska Dental Society met March 16th and organized. The first officers are: Dr. W. V. Sharp, of Stromsburg, president; Dr. George Gallagher, of Utica, vice-president, and Dr. Homer R. Hatfield, of York, secretary. The next session will be held in York, April 16th.

Knox County Dental Society were guests of the Warren County Society at Monmouth and were given a banquet. Dr. J. F. Kyler, president of the Warren County Society, delivered address of welcome and Dr. D. J. Griswold responded for the visitors.

The Miami Valley Society is the name of a newly organized society which had its first meeting at Dayton recently. The following officers were elected for the first year: President, P. T. Bollinger; vice-president, Dr. E. P. Tizzard; recording secretary, Dr. W. L. Wright; treasurer, Dr. L. C. Adams; corresponding secretary, Dr. M. C. Faul.

Xi Psi Phi Frat.—At the annual national meeting of the Xi Psi Phi, a fraternity of dental graduates, at the Great Northern Hotel, March 27th, the following officers were elected: President, Dr. W. J. Montgomery; vice-presidents, Dr. J. E. MacArthur and Dr. H. P. Pinney; secretary and treasurer, Dr. C. C. Markey. Twenty-seven chapters were represented.

REMOVALS.

Drs. C. C. Urban from Bement, Ill., to Paxton; C. Y. George from Lake City, Minn., to Park Rapids; C. A. King from St. Charles, Iowa, to Maxwell; G. M. Covell from Compton, Ill., to Virden; H. B. Sutton from Russell, Iowa, to Creston; L. L. Cramer from Johnstown, Ohio, to Stephenville; C. L. Leigh from Manchester, Iowa, to Davenport; O. L. Whitson from Nevada, Iowa, to Mechanicsville; Earl S. Hamel from Springfield, Mo., to Gault; Robinson from Unionville, Mich., to Port Huron; J. H. Bowe from Belvidere, Ill., to Chicago; Edward Ker from Reading, Pa., to Trenton; Cory Philpott from Tecumseh, Neb., to Cadwell, Idaho; R. Hamaker from Womelsdorf, Pa., to Bethel; Horton from Sioux City, Iowa, to Eldora; McCleery from Lancaster, Ohio, to Columbus; J. W. Madden from Fond du Lac, Wis., to Madison; E. R. Zanglein from Lincoln, Ill., to Clinton; C. D. Collier from Hingham, Wis., to DePere; J. William Loertz from Seymour, Ind., to Vincennes; A. S. Sanderson from Fargo, N. D., to Grand Forks, Minn.

Eye Infected from Tartar.—Dr. R. C. Davis, of Coldwater, while cleaning teeth for a patient, had the misfortune to be struck in the eye by a flying piece of tartar. The eye is badly swollen and inflamed and serious results are feared.

Illinois Dental Law Sustained.—The Supreme Court, April 18, in the case of Kettles against the people, an appeal from the Circuit Court of Will County, where Kettles was fined for practicing dentistry without a license, sustains the judgment of the lower court and holds that the State dental act is valid.

The Southwestern Michigan Dental Society held its annual meeting at Niles, April 11-12. The following officers were elected for the ensuing year: President, C. H. Funk, Cassopolis; vice-president, E. O. Lapiere, Paw Paw; secretary and treasurer, C. W. Johnson, Lawton. Battle Creek was decided upon for the next convention.

Fox River Dental Society.—The Fox River Dental Society held its quarterly meeting at St. Charles, Ill., March 14. About forty members of the profession were present and listened to papers by Dr. F. E. Roach and E. J. Perry, of Chicago. After the transaction of routine business, the company enjoyed a banquet at the St. Charles Hotel.

Dentist Saves Child and Mother From Fire.—The home of Dr. William W. Gardiner in Webster Groves was destroyed by fire March 26, after Dr. Gardiner had rescued his mother and his child by lowering them from a porch at the second floor. The loss is estimated at about \$6,500. The fire is said to have been caused by an electric wire. Dr. Gardiner is a dentist and has an office in St. Louis.

The Smyser Case.—Although Jacob H. Smyser, former secretary of the State Board of Dental Examiners, and Edward Flynn, detective for the same body, were found guilty by a jury and sentenced to the penitentiary, Judge Ben M. Smith declared there was a possibility of them appealing to the Supreme Court and finally going free. To avoid this he permitted the defendants to enter pleas of guilty and then fined each \$1,000. The action did not meet with the approval of Dr. J. N. Crouse, representing a number of dental organizations which have been assisting in the prosecution of the defendants.

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W. J. HOSTETTER, Emerson, Iowa.

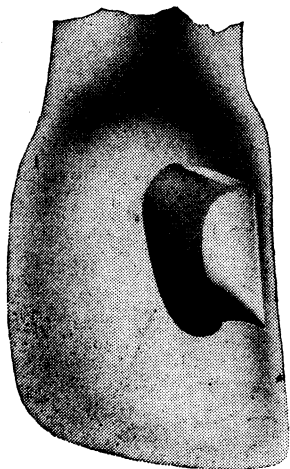
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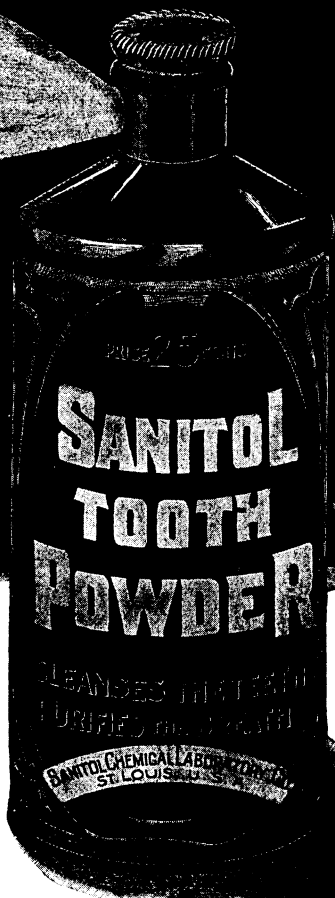


ARTHUR E. PECK, M. D., D. D. S., 403 Medical Block, MINNEAPOLIS, MINN.

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